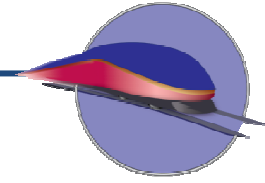


Corridor Program Name: NC T2.4 - SESHR - Charlotte to DC/NEC Date of Submission: 10/02/09 Version Number: C

High-Speed Intercity Passenger Rail (HSIPR) Program

Track 2–Corridor Programs:

Application Form



Welcome to the Application Form for Track 2–Corridor Programs of the Federal Railroad Administration’s High-Speed Intercity Passenger Rail (HSIPR) Program.

This form will provide information on a cohesive set of projects—representing a phase, geographic segment, or other logical grouping—that furthers a particular corridor service.

Definition: For purposes of this application, a “Corridor Program” is “a group of projects that collectively advance the entirety, or a ‘phase’ or ‘geographic section,’ of a corridor service development plan.” (*Guidance, 74 Fed. Reg. 29904, footnote 4*). A Corridor Program must have independent utility and measurable public benefits.

In addition to this application form and required supporting materials, applicants are required to submit a Corridor Service Overview.

An applicant may choose to represent its vision for the entire, fully-developed corridor service in one application or in multiple applications, provided that the set of improvements contained in each application submitted has independent utility and measurable public benefits. The same Service Development Plan may be submitted for multiple Track 2 Applications. Each Track 2 application will be evaluated independently with respect to related applications. Furthermore, FRA will make its evaluations and selections for Track 2 funding based on an entire application rather than on its component projects considered individually.

We appreciate your interest in the HSIPR Program and look forward to reviewing your entire application. If you have questions about the HSIPR program or the Application Form and Supporting Materials for Track 2, please contact us at HSIPR@dot.gov.

Instructions for the Track 2 Application Form:

- Please complete the HSIPR Application electronically. See Section G of this document for a complete list of the required application materials.
- In the space provided at the top of each section, please indicate the Corridor Program name, date of submission (mm/dd/yyyy), and an application version number assigned by the applicant. The Corridor Program name must be identical to the name listed in the Corridor Service Overview Master List of Related Applications. Consisting of less than 40 characters, the Corridor Program name must consist of the following elements, each separated by a hyphen: (1) the State abbreviation of the State submitting this application; (2) the route or corridor name that is the subject of the related Corridor Service Overview; and (3) a descriptor that will concisely identify the Corridor Program’s focus (e.g., HI-Fast Corridor-Main Stem).
- Section B, Question 10 requires a distinct name for each project under this Corridor Program. Please the following the naming convention: (1) the State abbreviation; (2) the route or corridor

name that forms part of the Corridor Program name; and (3) a project descriptor that will concisely identify the project's focus (e.g., HI-Fast Corridor-Wide River Bridge). For projects previously submitted under another application, please use the **same name** previously used on the project application.

- For each question, enter the appropriate information in the designated gray box. If a question is not applicable to your Track 2 Corridor Program, please indicate "N/A."
- Narrative questions should be answered within the limitations indicated.
- Applicants must upload this completed and all other application materials to www.GrantSolutions.gov by October 2, 2009 at 11:59 pm EDT.
- Fiscal Year (FY) refers to the Federal Government's fiscal year (Oct. 1- Sept. 30).

Corridor Program Name: NC T2.4 - SESHHR - Charlotte to DC/NEC Date of Submission: 10/02/09 Version Number: C

A. Point of Contact and Application Information

(1) Application Point of Contact (POC) Name: Patrick Simmons		POC Title: Director, Rail Division, NCDOT		
Applicant State Agency or Organization Name: NCDOT				
Street Address: 1 South Wilmington Street	City: Raleigh	State: North Caroli na	Zip Code: 27601	Telephone Number: (919) 733-7245 ext. 263
Email: pbsimmons@ncdot.gov		Fax: (919) 715-6580		

Corridor Program Name: NC T2.4 - SESHHR - Charlotte to DC/NEC Date of Submission: 10/02/09 Version Number: C

B. Corridor Program Summary

(1) **Corridor Program Name:** NC T2.4 - SESHHR - Charlotte to DC/NEC

(2) **What are the anticipated start and end dates for the Corridor Program?** (mm/yyyy)

Start Date: Upon notice to proceed

End Date: 09/2017

(3) **Total Cost of the Corridor Program:** (Year of Expenditure (YOE) Dollars*) \$ 4,322,271,844

Of the total cost above,, how much would come from the FRA HSIPR Program: (YOE Dollars**) \$ 4,292,271,844

Indicate percentage of total cost to be covered by matching funds: 0.7 %

Please indicate the source(s) for matching funds: Federal, State, Local (see Sect. F)

* Year-of-Expenditure (YOE) dollars are inflated from the base year. Applicants should include their proposed inflation assumptions (and methodology, if applicable) in the supporting documentation.

** This is the amount for which the Applicant is applying.

(4) **Corridor Program Narrative.** *Please limit response to 12,000 characters.*

Describe the main features and characteristics of the Corridor Program, including a description of:

- The location(s) of the Corridor Program's component projects including name of rail line(s), State(s), and relevant jurisdiction(s) (include a map in supporting documentation).
- How this Corridor Program fits into the service development plan including long-range system expansions and full realization of service benefits.
- Substantive activities of the Corridor Program (e.g., specific improvements intended).
- Service(s) that would benefit from the Corridor Program, the stations that would be served, and the State(s) where the service operates.
- Anticipated service design of the corridor or route with specific attention to any important changes that the Corridor Program would bring to the fleet plan, schedules, classes of service, fare policies, service quality standards, train and station amenities, etc.
- How the Corridor Program was identified through a planning process and how the Corridor Program is consistent with an overall plan for developing High-Speed Rail/Intercity Passenger Rail service, such as State rail plans or plans of local/regional MPOs.
- How the Corridor Program will fulfill a specific purpose and need in a cost-effective manner.
- The Corridor Program's independent utility.
- Any use of new or innovative technologies.
- Any use of railroad assets or rights-of-way, and potential use of public lands and property.
- Other rail services, such as commuter rail and freight rail that will make use of, or otherwise be affected by, the Corridor Program.
- Any PE/NEPA activities to be undertaken as part of the Corridor Program, including but not limited to: design studies and resulting program documents, the approach to agency and public involvement, permitting actions, and other key activities and objectives of this PE/NEPA work.

This application represents the introduction of High Speed Intercity Passenger Rail Service from Charlotte to Washington D.C. and the NEC. NCDOT is choosing to implement rail travel time goals for the Southeast High Speed Rail (SESHR) Corridor by undertaking the projects enumerated in the Technical Monograph: Transportation Planning for the Richmond-Charlotte Railroad Corridor developed by the Federal Railroad Administration, U.S. Department of Transportation in January 2004. The projects, described in this application,

align with North Carolina's Service Development Plan.

Both Virginia and North Carolina have a history of issuing comprehensive state rail plans to guide the development of freight and passenger rail in their states. These rail plans have continually recognized the vision of high speed rail and have actively planned and programmed projects to implement SEHSR. North Carolina has elected to use an incremental building block approach for the implementation of SEHSR. This approach provides additional rail passenger service frequencies one at a time with the infrastructure improvements necessary to accommodate each frequency. As each frequency is added, and the corridor developed, the state moves one step closer to the vision of high speed rail from Charlotte to Washington D.C. and the reality of SEHSR.

The proposed project includes 32 projects all of which are currently on the NCDOT TIP thus demonstrating the state's commitment to funding these programs. The elements consist of the purchase of 168 miles of CSXT owned Right-of-Way on an existing underutilized corridor with segments that are trackless with no through freight service; Final EIS and ROD for Richmond to Raleigh; gathering base data to begin Final Design and Construction for Richmond to Raleigh; completing the Final Design for constructing SEHSR from Richmond to Raleigh; and construction – This includes construction of track, including double/triple tracking, structures, signals, grade separations and roadway adjustments. Construction work will take place within NCRR ROW. A map of the proposed improvements is included as part of this application.

The specific elements of the project are:

- SEHSR Right-of-way Phase I - acquire abandoned CSXT right-of-way corridor along S-line from A-line Collier Yard, VA to Norlina, NC for SEHSR service from Charlotte to Washington D.C. (TIP # P-3819)
- SEHSR Right-of-way Phase II – acquire active CSXT S-line corridor from Norlina to Cary for the rail corridor SEHSR service from Charlotte to Washington D.C. (TIP # P-3819)
- SEHSR Right-of-way Phase III – acquire right-of-way for corridor and road relocation and grade separations exclusive of the CSXT owned portions of the S-line corridor which completes SEHSR ROW acquisitions. (TIP # P-3819)
- Complete the Final EIS and ROD for Richmond to Raleigh. Gather base data to begin Final Design for the Preferred Corridor. Complete Final Design for constructing SEHSR from Richmond to State Line (168 miles) – This includes designs for construction of track, structures, signals, grade separations and roadway adjustments. This provides grade separated SEHSR service connection between Richmond and Raleigh and facilitates the Charlotte to DC service with speeds up to 110 mph. (TIP # P-3819)
- Acquire parcel needed for SEHSR ROW based on documented property owner hardship and need to sell. This prevents the property from being sold and developed costing more to acquire in the future. (TIP # P-3819)
- Grade separation of planned connector road between US-1A and North White Street and extension of Franklin Street to facilitate connector to Rogers Road. This will eliminate three crossings. (TIP # P-3819)
- Charlotte Northend Phase II Northend Passenger Bypass. Includes new bridge over Tyron Street and improvements to NS Yard tracks and passenger bypass flyover of NS providing two dedicated passenger tracks. (TIP # P-5002)
- Rogers Lake Road Grade Separation eliminates a crossing hazard at Universal and Winecoff School Road in Kannapolis. (TIP # P-3819)
- North Side Grade Separations, Salisbury eliminates crossing hazard in the area of 12th Street and Bringle Ferry Road. (TIP # U-3460)
- Long Ferry Road grade separation. (TIP # U-3822)
- Triple track at Linwood Yard north of Salisbury Station would allow for efficient meets and over takes of other traffic and improve travel time. (TIP # P-3819)
- Liberty Drive/Turner Street Grade Separation in Thomasville. (TIP # P-3819)
- Scientific Street Grade Separations in Thomasville. (TIP # P-3819)

- Oakdale Ave grade separation in Jamestown. (TIP # P-3819)
- Triple track Greensboro around Ponomia Yard area eases congestion for passenger trains from freight traffic waiting to enter freight yard. (TIP # P-3819)
- Deep River Bridge realignment improves existing speed of 65 mph to design speed of 79 mph with future upgrade to 90 mph. (TIP # P-3819)
- Double track Greensboro to McLeansville Siding. (TIP # P-3819)
- Guilford Grade Separations including Franklin Boulevard and Ward Road and crossing closures at O’Ferrell Street, Maxfield Road and Buchanan Church Road and extension of Naco Road on new location from O’Ferrell Street to Old Burlington Road. Project also includes curve realignment and replacement of Buffalo Creek Bridge. Finally, a Universal Crossover at McLeansville (MP H7.7) will improve schedule reliability and reduce travel time. It also completes a 9-mile double track section from Greensboro to McLeansville and provides capacity for a 6th frequency. The grade separations improve safety at multiple crossings while improving speed and reducing travel time. It also increases capacity by allowing track changes to improved track utilization and eliminates a crossing hazard. The design speed is 79 mph with a future upgrade to 90 mph. (TIP # P-3819)
- Double track H 12.8 – H 16.5 and curve realignment, including Huffines Street Grade Separation and H14 Curve realignment. – 1000 feet, Gibsonville. This project provides schedule reliability and reduces travel time. It completes 15 miles of double track from Greensboro to Elon with a design speed of 79 mph with a future upgrade to 90 mph. (TIP # P-3819)
- Double track 6.5 miles from Haw River to Melbane Siding, including Haw River Bridge and NC 49 Bridge replaced as double track viaduct. This includes major curve realignments between MP H26 and H29; a replacement railroad bridge at Back Creek; and grade separation at Stone Street. This provides for at-speed meets of passenger trains and reduces travel time. Existing speeds are 45-50 mph for three miles. Project design speed is 79 mph with a future upgrade to 90 mph. (TIP # P-3819)
- Curve realignments east of Efland for 4 curves and possible 70/I-85 Connector Bridge Replacement. This improves existing speed of 50-55 mph. The project design speed is 79 mph with future upgrade to 90 mph. (TIP # P-3819)
- Curve realignment west of Hillsborough and replace bridge over Eno River. This improves existing speed of 50-55 mph with a design speed of 79 mph and a future upgrade to 90 mph. (TIP # P-3819)
- Double track Funston to Durham and improve 5 bridges for additional track and improved track geometry. This provides for at-speed meets of passenger trains and reduces travel time. Existing speeds are 55-60mph with a project design speed of 79 mph with a future upgrade to 90 mph. (TIP # P-3819)
- Double track 2 miles from Durham Station to D&S Junction. This provides capacity at Durham Station though a center island platform and increases efficiency /reliability on approaches to the station. The project design speed is 79 mph with a future upgrade to 90 mph. (TIP # P-3819)
- Extension of East Durham siding and realignment of railroad from Glover Road to Alexander Drive including Glover Road Grade Separation, Wrenn Road Crossing Closure and Ellis Road (east side) grade separation. This will provide speed increases on 2.1 miles and allows at-speed meets of passenger trains. Existing speeds of 55-60 mph to have a design speed of 79 mph with future upgrades to 90 mph. This allows for full use of siding without blocking a crossing. (TIP # P-3819)
- Double track Alexander Drive to Clegg which includes a bridge over I-40 and double track Clegg to Fetner. This provides at-speed meets of passenger trains with a design speed of 79 mph with a future upgrade to 90 mph. (TIP # P-3819)
- 2 SEHSR Station platforms and canopies to support new service. (TIP # P-3819)
- 4 new train sets consisting of passenger cars, a cab car, power car and/or a locomotive. (TIP # P-2819)

The projects, described in this application, are critical to the development of the federally designated SEHSR corridor connecting the NEC south to Jacksonville, Orlando, Tampa, and Miami, FL, and southwest to Atlanta, GA, ultimately connecting to the Gulf Coast

High Speed Rail Corridor extending to Louisiana which will benefit the entire East Coast of the United States. These projects will provide immediate job creation and sustained long term job creation as the corridor continues to grow and flourish. Not only will benefits be derived on the SEHSR corridor, including the Piedmont Corridor (a part of the SEHSR) and the NEC, but also on Amtrak. Amtrak system trains may benefit by diverting from the CSXT A line to the SEHSR corridor. These projects are crucial to the completion of the SEHSR corridor and improving service that will ultimately increase ridership, provide new train service and schedules thereby offering alternative transportation choices, and benefit the environment and overall quality of life in the region.

The new train sets will meet or exceed FRA/EPA emission and noise standards and be energy efficient (fuel savings).

The implementation of high speed rail from Washington, DC to Charlotte, NC is realization of a multi-year, incremental planning and development process. The process formally began when the SHSR Corridor was designated a high speed rail corridor by the US DOT on October 20, 1992. In subsequent years, the corridor was expanded to the south to Florida and to the east to Hampton Roads, VA. To move the corridor closer to realization, the states of North Carolina and Virginia agreed to jointly develop the required planning and environmental documentation. In 1998, a memorandum of understanding for this process was entered into by NC DOT, Virginia Department of Rail and Public Transportation, Federal Highway Administration, and FRA.

In 1991, a Tier I Environmental Impact Statement was begun with nine alternatives. A draft EIS was concluded in 2001 and a final EIS with a preferred corridor issued in June 2002. A record of decision was jointly issued by FRA and FHWA in October, 2002. The Tier II EIS for the Richmond to Raleigh segment of SEHSR is well under way, with the completion currently slated for early 2010 and a ROD expected in 2011.

In its interim guidance, FRA has defined the concept of independent utility for purposes of high-speed rail projects. Under this definition, both equipment acquisitions and infrastructure project improvements have independent utility and can be completed individually with benefits accrued to North Carolina's rail passenger system.

There is currently freight traffic on this corridor with higher volumes on the Greensboro to Charlotte section than the Greensboro to Raleigh segment. Existing freight service operated by Norfolk Southern Railway over the NCRR will not be affected by this additional frequency.

The ROW acquisitions will continue NC DOT's decade long effort to buy, assemble and protect the SEHSR corridor to provide fully operational high speed rail service.

(5) Describe the service objective(s) for this Corridor Program (check all that apply):

- Additional Service Frequencies
- Improved Service Quality
- Improved On-Time performance on Existing Route
- Reroute Existing Service
- Increased Average Speeds/Shorter Trip Times
- New Service on Existing IPR Route
- New Service on New Route
- Other (Please Describe): Station improvements and other passenger amenities; improve safety and mobility (grade separation).

(6) Right-of-Way-Ownership. Provide information for all railroad right-of-way owners in the Corridor Program area. Where railroads currently share ownership, identify the primary owner. *If more than three owners, please detail in Section F of this application.*

Type of Railroad	Railroad Right-of-Way Owner	Route Miles	Track Miles	Status of agreements to implement projects
Regional or Shortline	North Carolina Rail Road (NCRR)	173	229	Master Agreement in Place
Class 1 Freight	Norfolk Southern (NS)	n/a	n/a	Master Agreement in Place
Class 1 Freight	CSX Transportation (CSXT)	168	56	Master Agreement in Place

(7) Services. Provide information for all existing rail services within Corridor Program boundaries (freight, commuter, and intercity passenger). *If more than three services, please detail in Section F of this application.*

Type of Service	Name of Operator	Top Speed Within Boundaries		Number of Route Miles Within Boundaries	Average Number of Daily One-Way Train Operations within Boundaries ¹	Notes
		Passenger	Freight			
Freight	Norfolk Southern (NS)	n/a	60	173	26	26 (Greensboro to Charlotte) 5 (Greensboro to Raleigh)
Freight	CSX Transportation (CSXT)	n/a	40	56	2-3	(Norlina to Raleigh)
Intercity Pass	Amtrak	79	n/a	173	6	6 (Greensboro to Charlotte) 4 (Greensboro to Raleigh)

(8) Rolling Stock Type. Describe the fleet of locomotives, cars, self-powered cars, and/or trainsets that would be intended to provide the service upon completion of the Corridor Program. *Please limit response to 2,000 characters.*

In providing the needed motive power and capacity for SEHSR this application proposes the acquisition of four (4) new high speed train sets which includes passenger cars, a cab car, power car and/or locomotives. The power car/locomotives will comply with EPA's Tier II emissions and noise standards and improved energy efficiency, as documented in NCDOT's requirements for new locomotives (CES- 0001527).

The new train sets will be capable of running at speeds in excess of 125 in order to sustain speeds of 110mph.

NC-owned equipment is comprised of a minimum of a 7-car consist with a business car, lounge car and four coaches. The coaches have a 70-seat capacity. (The Charlotte maintenance facility is designed to accommodate 8-car consists.) The train sets will meet Amtrak's national equipment pool requirements.

(9) Intercity Passenger Rail Operator. If applicable, provide the status of agreements with partners that will operate the benefiting high-speed rail/intercity passenger rail service(s) (e.g., Amtrak). If more than one operating partner is envisioned, please describe in Section F.

Name of Operating Partner: Amtrak

Status of Agreement: Preliminary executed agreement/MOU

¹ One round trip equals two one-way train operations.

(10) Master Project List. Please list all projects included in this Track 2 Corridor Program application in the table below. If available, include more detailed project costs for each project as a supporting form (see Section G below).

Project Name	Project Type	Project Description	Project Start Date (mm/yyyy)	Estimated Project Cost (Millions of YOE Dollars, One Decimal)		Was this Project included in a prior HSIPR application? Indicate track number(s).	Are more detailed project costs included in the Supporting Forms?
				Total Cost	Amount Applied For		
SEHSR NC T2.4 Proj #47 Raleigh to Richmond - FEIS, ROW, Surveying, Design, Construction, Stations and Rolling Stock	Final Design/C	Grade Separation of planned connector road between US-1A and N White Street and extension of Franklin St. to facilitate connector to Rogers Rd.	09/2009	3,729.1	3,720.1	1b - 46(e) & (f)	Yes
SEHSR NC T2.4 Proj #48 Charlotte Northend Phase II	Final Design/C	Charlotte Northend Phase II - Northend Passenger Bypass. Includes new bridge over Tryon Street, and improvements to NS yard tracks and passenger bypass flyover of NS.	07/2010	52.1	52.1	No	Yes
SEHSR NC T2.4 Proj #49 Grade Separation, Kannapolis	Final Design/C	Eliminates up to 2 existing crossings potentially creating a 6 mile grade separated corridor.	01/2013	10.4	7.4	No	Yes
SEHSR NC T2.4 Proj #50 North Side Grade Separation, Salisbury	Final Design/C	Construct grade separation in area of 12 th St/Bringle Ferry Rd. Eliminates crossing hazard.	01/2013	20.7	18.7	No	Yes
SEHSR NC T2.4 Proj #51 Long Ferry Rd. Grade Separation, Spencer	Final Design/C	Eliminates crossing hazard.	01/2012	16.5	14.5	No	Yes
SEHSR NC T2.4 Proj #52 Triple track at Linwood Yard or North of Salisbury Station	Final Design/C	Allows for efficient meets and over takes of other traffic and improves travel time in heavily congested Linwood Yard area.	01/2013	34.1	34.1	No	Yes
SEHSR NC T2.4 Proj #53 Liberty Drive/Turner St. Grade Separation, Thomasville	Final Design/C	Eliminates crossing hazard.	01/2012	5.9	3.9	No	Yes
SEHSR NC T2.4 Proj #54 Scientific St. Grade Separation, Jamestown	Final Design/C	Eliminates crossing hazard.	01/2012	4.0	2.0	No	Yes
SEHSR NC T2.4 Proj #55 Oakdale Ave. Grade Separation, Jamestown	Final Design/C	Eliminates crossing hazard.	01/2012	6.4	4.4	No	Yes
SEHSR NC T2.4 Proj #56 Triple track Greensboro around Pomona Yard area	Final Design/C	Eases congestion for passenger trains from freight traffic waiting to enter freight yard.	01/2013	28.0	28.0	No	Yes
SEHSR NC T2.4 Proj #57 Deep River Bridge realignment	Final Design/C	Improves existing speed from 65 mph to design speed 79 mph with future upgrade to 90 mph.	01/2013	13.8	13.8	No	Yes
SEHSR NC T2.4 Proj #58 Double Track Greensboro to McLeansville Siding	Final Design/C	Provides schedule reliability and reduces travel time. Completes a 9-mile	01/2012	81.1	78.1	No	Yes

		double track section from Greensboro to McLeansville and provides capacity for 6 th Frequency.					
SEHSR NC T2.4 Proj #59 Double Track H 12.8 - H 16.5 and curve realignment, including Huffines St. Grade Separation and H14 Curve Realignment - 1,000 feet, Gibsonville	Final Design/C	Provides schedule reliability and reduces travel time. Completes 15 miles of double track from Greensboro to Elon. Design speed 79 mph with future upgrade to 90 mph.	01/2011	29.2	27.2	No	Yes
SEHSR NC T2.4 Proj #60 Double Track 6.5 miles from Haw River to Mebane Siding, including Haw River Bridge and NC 49 Bridge replaced as double track viaduct	Final Design/C	Provides for at-speed meets of passenger trains and reduces travel time. Existing speed 45-50 mph for three miles. Design speed 79 mph with future upgrade to 90 mph.	07/2010	93.8	93.8	No	Yes
SEHSR NC T2.4 Proj #61 Curve realignments east of Effand for 4 curves and possible 701/I-85 Connector Bridge replacement	Final Design/C	Improves existing speed 50-55 mph. Design speed 79 mph with future upgrade to 90 mph.	01/2011	13.2	13.2	No	Yes
SEHSR NC T2.4 Proj #62 Curve realignment west of Hillsborough and replace bridge over Eno River	Final Design/C	Improves existing speed 50-55 mph. Design speed 79 mph with future upgrade to 90 mph.	01/2011	18.3	18.3	No	Yes
SEHSR NC T2.4 Proj #63 Double track Funston to Durham and improve 5 bridges for additional track and improved track geometry	Final Design/C	Provides for at-speed meets of passenger trains and reduces travel time. Existing speed 55-60 mph. Design speed 79 mph with future upgrade to 90 mph.	01/2012	52.0	52.0	No	Yes
SEHSR NC T2.4 Proj #64 Double track 2 miles from Durham Station to D&S Junction	Final Design/C	Provides capacity at Durham Station through center island platform and increases efficiency/reliability on approaches to station. Design speed 79 mph with future upgrade to 90 mph.	01/2012	11.6	11.6	No	Yes
SEHSR NC T2.4 Proj #65 Extension of East Durham Siding and realignment of railroad from Glover Road to Alexander Drive, including Glover Road Grade Separation, Wrenn Road crossing Closure, and Ellis Road (East) Grade Separation	Final Design/C	Provides for speed increase on 2.1 miles and allows at-speed meets of passenger trains. Existing speed 55-65 mph. Design speed 79 mph with future upgrade to 90 mph. Improves safety and reliability.	01/2013	40.1	37.1	No	Yes
SEHSR NC T2.4 Proj #66 Double track Alexander Drive to Clegg includes bridge over I-40	Final Design/C	At-speed meets of passenger trains. Design speed 79 mph with future upgrade to 90 mph.	01/2012	19.4	19.4	No	Yes
SEHSR NC T2.4 Proj #67 Double track Clegg to Fetner	Final Design/C	Provides for at-speed meets of passenger trains. Design speed 79 mph with future upgrade to 90 mph.	01/2012	42.4	42.4	No	Yes

Note: In addition to **program** level supporting documentation, all applicable **project** level supporting documentation is required prior to award. If project level documentation is available now, you may submit it; however, if it is not provided in this application, this project may be considered as a part of a possible Letter of Intent but will not be considered for FD/Construction grant award until this

documentation has been submitted.

In narrative form, please describe the sequencing of the projects listed in Question 10. Which activities must be pursued sequentially, which can be done at any time, and which can be done simultaneously? Please limit response to 4,000 characters.

Projects within the SEHSR program are sequenced to minimize rail traffic interferences and delays while providing a cost effective contracting approach. Current conditions have been used as the basis for initial project sequencing; future rail traffic and economic conditions may suggest different approaches, particularly in the out years of deploying SEHSR. There are also instances where it may be necessary to do projects in the later frequency applications earlier than projects in the preceding frequency. SEHSR represents a continuum of projects that yields the capacity to run additional, faster passenger trains while accommodating freight traffic growth. These applications correspond to increases in network capacity and passenger train frequencies. Situations may present themselves in the future that would provide earlier implementation of some of the projects at lower cost than budgeted. These may occur when the railroads are upgrading facilities or systems and can piggyback SEHSR projects that are mutually beneficial.

All parties involved must coordinate their individual efforts closely. Railroad related projects such as signals, double tracking, sidings, and interlockings will be the responsibility of the railroad owner using railroad forces or specialized railroad contractors under their management. Other infrastructure projects will use contractors who specialize in the activity required. NCDOT is the SEHSR Program Manager. NCDOT will need to utilize consultant and other outside contractors to execute the contracts. Individual projects may need to be staggered based on funding, contractor availability, materials, NCDOT and railroad staff resources. On large and complex SEHSR components NCDOT will name a project manager who will be responsible for overall project implementation and timely completion. Project managers will be responsible for defined segments of the corridor and all the projects in the given territory to ensure proper interface with all involved parties.

Initial project sequencing is described below:

- Project #s 49, 50, 51, 53, 54, 55, and 65 are grade separations and may be done independently and simultaneously;
- Project #s 52, 56, 58, 59, 60, 63, 64, 66 and 67 involve the installation of double or triple track and may be done independently, simultaneously or sequentially depending on how the contract(s) is/are structured;
- Project #s 57, 61 and 62 involve track and bridge realignments and may be done independently, simultaneously or sequentially depending on how the contract(s) is/are structured;
- Project 46, SEHSR, Raleigh to Richmond will be undertaken sequentially. A project manager will oversee the segmenting of the project subcomponents with grade separations built followed by track construction and "doing it right the first time", as suggested by FRA; and
- Project # 48 will be constructed independently, simultaneously or sequentially depending on how the contract(s) is/are structured.

Corridor Program Name: NC T2.4 - SESHHR - Charlotte to DC/NEC Date of Submission: 10/02/09 Version Number: C

C. Eligibility Information

(1) Select applicant type, as defined in Appendix 1.1 of the HSIPR Guidance:

- State
 Amtrak

If one of the following, please append appropriate documentation as described in Section 4.3.1 of the HSIPR Guidance:

- Group of States
 Interstate Compact
 Public Agency established by one or more States
 Amtrak in cooperation with a State or States

(2) Establish completion of all elements of a Service Development Plan. Note: One Service Development Plan may be referenced in multiple Track 2 Applications for the same corridor service.

Please provide information on the status of the below Service and Implementation Planning Activities:

	Select <u>One</u> of the Following:			Provide Dates for all activities:	
	No study exists	Study Initiated	Study Completed	Start Date (mm/yyyy)	Actual or Anticipated Completion Date (mm/yyyy)
Service Planning Activities/Documents					
Purpose & Need/Rationale	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		06/2002
Service/Operating Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		09/2009
Prioritized Capital Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		09/2009
Ridership/Revenue Forecast	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		09/2009
Operating Cost Forecast	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		09/2009
Assessment of Benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		06/2002
Implementation Planning Activities/Documents					
Program Management Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		08/2009
Financial Plan (capital & operating – sources/uses)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		09/2009
Assessment of Risks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		08/2009

(3) Establish Completion of Service NEPA Documentation (the date document was issued and how documentation can be verified by FRA). The following are approved methods of NEPA verification (in order of FRA preference): 1) References to large EISs and EAs that FRA has previously issued, 2) Web link if NEPA document is posted to a website (including www.fra.gov), 3) Electronic copy of non-FRA documents attached with supporting documentation, or 4) a hard copy of non-FRA documents (large documents should not be scanned but should be submitted to FRA via an express delivery service). See HSIPR Guidance Section 1.6 and Appendix 3.2.9.

Note to applicants: Prior to obligation of funds for FD/Construction activities under Track 2, all project specific documents will be required (e.g. Project NEPA, Financial Plan, and Project Management Plan).

Documentation	Date (mm/yyyy)	Describe How Documentation Can be Verified
Tier 1 NEPA EIS (Programmatic)	06/2002	See application attachment
Tier 1 NEPA EA		
Tier 1 NEPA EA		

(4) Indicate if there is an environmental decision from FRA (date document was issued and web hyperlink if available)

Documentation	Date (mm/yyyy)	Hyperlink (if available)
Record of Decision	10/2002	www.fra.dot.gov/downloads/RRDev/setier1rod.pdf
Finding of No Significant Impact		
Finding of No Significant Impact		

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D. Public Return on Investment

(1) 1A. Transportation Benefits. See HSIPR Guidance Section 5.1.1.1. Please limit response to 8,000 characters.

How is the Corridor Program anticipated to improve Intercity Passenger Rail (IPR) service? Describe the overall transportation benefits, including information on the following (*please provide a level of detail appropriate to the type of investment*):

- Introduction of new IPR service: Will the Corridor Program lead directly to the introduction of a new IPR service that is not comparable to the existing service (if any) on the corridor in question? Describe the new service and what would make it a significant step forward in intercity transportation.
- IPR network development: Describe projected, planned, and potential improvements and/or expansions of the IPR network that may result from the Corridor Program, including but not limited to: better intermodal connections and access to stations; opportunities for interoperability with other services; standardization of operations, equipment, and signaling; and the use of innovative technologies.
- IPR service performance improvements (*also provide specific metrics in table 1B below*): Please describe service performance improvements directly related to the Corridor Program, as well as a comparison with any existing comparable service. Describe relevant reliability improvements (e.g., increases in on-time performance, reduction in operating delays), reduced schedule trip times, increases in frequencies, aggregate travel time savings (resulting from reductions to both schedule time and delays, e.g., expressed in passenger-minutes), and other relevant performance improvements.
- Suggested supplementary information (*only when applicable*):
 - Transportation Safety: Describe overall safety improvements that are anticipated to result from the Corridor Program, including railroad and highway-rail grade crossing safety benefits, and benefits resulting from the shifting of travel from other modes to IPR service.
 - Cross-modal benefits from the Corridor Program, including benefits to:
 - ✓ Commuter Rail Services – Service improvements and results (applying the same approach as for IPR above).
 - ✓ Freight Rail Services – Service performance improvements (e.g., increases in reliability and capacity), results (e.g. increases in ton-miles or car-miles of the benefiting freight services), and/or other congestion, capacity or safety benefits.
 - ✓ Congestion Reduction/Alleviation in Other Modes; Delay or Avoidance of Planned Investments – Describe any expected aviation and highway congestion reduction/alleviation, and/or other capacity or safety benefits. Also, describe any planned investments in other modes of transportation (and their estimated costs if available) that may be avoided or delayed due to the improvement to IPR service that will result from the Corridor Program.

The projects proposed in this application would provide transportation benefits that would extend all along the length of the East Coast of the United States and beyond. The success of this application is crucial to the completion of the federally designated SEHSR Corridor and its natural connection to the Northeast Corridor (NEC). Intercity passenger rail will truly become a viable option for travelers from Charlotte to DC to the NEC and beyond. Increased frequencies will make opportunities to choose passenger rail accessible to more riders. Higher speeds will be more readily attainable because the 168 mile ROW segment to be purchased (the S line), is underutilized and will not face the congestion and bottleneck issues encountered by tracks along other segments of the rail system. Service will be more reliable, efficient, and accessible, with improved trip times and On Time Performance (OTP) standards leading to customer satisfaction and increased ridership.

In its "FRA USDOT Technical Monograph: Transportation Planning for the Richmond-Charlotte Railroad Corridor" (Jan.2004) FRA underscored the importance and the advantages of securing the S Line. "Because of the light freight traffic levels, the existence of a right-of-way, the ability to reconstruct, free of traffic, on the abandoned portion, and the facility's status as the "air line" or shortest route between Richmond and Raleigh, the S line constitutes an opportunity for the States to establish high-speed rail relatively quickly and at a reasonable cost. Noteworthy is the ability to rebuild the S Line 'right the first time' – with time-saving realignments that could in the absence of daily traffic loads, be built at very low incremental expenditure."

The benefits to other transportation modes will be far reaching as this segment of the corridor develops. Highways and airways will be less congested, and passenger and freight trains will operate more reliably along the corridor due to improved operational efficiency and higher speeds for both. The benefits of developing the S Line and fully implementing HSIPR along the corridor are consistent with the intent of NCDOT from the inception of its passenger rail program; consistent with the other States of SEHSR; and consistent with the Administration in establishing the HSIPR program as part of the provisions of the American Recovery and Reinvestment Act (ARRA) of 2009.

In fact, this application, and the elements herein, will bring to fruition the President's vision for High Speed Rail in which he so aptly stated – "We must start developing clean, energy-efficient transportation that will define our regions for centuries to come...High speed rail is long overdue, and this plan lets American travelers know they are not doomed to a future of long lines at the airports or jammed cars on the highways." (President's statement releasing his Vision for HSR 4/16/09)

After ROW acquisition and Final Design and construction of the elements described in the application; ridership projections are astounding. There will be 1,015,742 passenger trips in the 1st full yr of operation, 1,206,435 in the 5th full yr, and 1,467,132 in the 10th yr. Annual passenger miles are estimated to be 295 million in the 1st full yr, increasing to 341 million in the 5th yr, and to 401 million in the 10th full yr of operation! On Time Performance, (OTP) after just 1 yr, is expected to be 90% and will hold steady at 90% through the 10th yr even while infrastructure improvements continue to take place along the corridor. Truly a HSIPR corridor, with top operating speeds of 110 MPH in the 1st full yr of operation! As customers take advantage of reliable, faster train travel; average daily round trips are expected to be 4 per typical weekday in the 1st full yr of operation.

Furthermore, the operation of SEHSR is projected to divert over 690,000 intercity auto trips and 200.5 million vehicle miles of travel from the Charlotte to Washington, DC highway corridor in just its 1st full year of operation. This diversion represents approximately 2% of all intercity auto passenger traffic in this corridor. SEHSR will also have a significant impact on air travel, diverting 255,000 air passenger trips in its 1st full year of operation, amounting to over 4% of passenger air travel among City pairs served by SEHSR.

Each of these projections are attainable, and made possible because of the availability of the underutilized 168 mile ROW (S Line) segment to be acquired; and due to the culmination of 20+ years of consistent planning and incremental building blocks put into place by NCDOT and its partners towards goals established in 1992 when Congress initially designated SEHSR as 1 of 5 federally designated HSR corridors.

Safety will also be a top priority, just as it is throughout NC's rail system. This project entails a large number of critical grade crossing components that will be resolved as part of a continuation of NCDOT's nationally recognized Sealed Corridor Program – the first in the nation. As described in the "FRA USDOT Technical Monograph" "The Sealed Corridor Initiative serves as a model for grade crossing hazard elimination. With its program of technology installation, testing, and assessment, the Initiative is a prime example of a cost-effective, comprehensive, corridor-wide grade crossing treatment."

Importantly, the NC Sealed Corridor Program has proven to be effective – it saves lives – according to the USDOT Volpe Center – their Fatal Crash Analysis estimated 19.7 potential “lives saved” with the projects implemented on the Sealed Corridor through December 2007. In fact, as recently as July 24, 2009, in its Safety Strategy Discussion Draft for Public Outreach, FRA stated that “there have been demonstrated successes in deploying ‘sealed corridor’ technology in designated High-Speed Rail Corridors. The most mature of these corridors is on the North Carolina Railroad, the route of Intercity Corridor Passenger Service sponsored by the NCDOT”.

In general, the many elements described within, including; double tracking, triple tracking, and curve realignment projects, will lead to reducing delays, improving schedule reliability, allowing for increased speeds, reducing travel times, and improving air quality and quality of life issues; as well as improving safety, increasing ridership and promoting passenger rail as a viable and preferred transportation alternative.

One specific example is the Double Tracking of Greensboro to McLeansville siding; and the series of projects combined with it, which will lead to; schedule reliability, travel time reduction; and the completion of a 9 mile double track section. It will also provide capacity for a future 6th frequency passenger rail service. It will improve safety at multiple crossings, increase speeds, and increase capacity; while eliminating crossing hazards and preventing accidents.

Another, of many similar examples, the extension of East Durham siding and track realignment from Glover Rd to Alexander Drive, (including 2 grade separations and a road crossing closure) will improve speeds over a 2.1 mile stretch from the existing 55-60 mph to a design speed of 79 mph, with future upgrades to 90 mph, will allow “at speed” meets of passenger trains, and will improve safety, reliability and operational efficiency.

Overall, the infrastructure improvements along the corridor will result in benefits accruing to the public and the freight railroads. Double tracking; curve realignments and passing sidings, will benefit freight railroads by increasing speeds, improving capacity, safety, schedule reliability; and result in increases in ton miles and car miles, as well as improving operational efficiency.

In total, the benefits to be accrued are far reaching and may well be the last best opportunity to truly connect SEHSR and the NEC and make vision become reality.

1B. Operational and Ridership Benefits Metrics: In the table(s) below, provide information on the anticipated levels of transportation benefits and ridership that are projected to occur in the corridor service or route, following completion of the proposed Corridor Program.

Note: The “Actual—FY 2008 levels” only apply to rail services that currently exist. If no comparable rail service exists, leave column blank.

Corridor Program Metric	Actual – FY 2008 levels	Projected Totals by Year		
		First full year of operation	Fifth full year of operation	Tenth full year of operation
Annual passenger-trips	N/A	1,015,742	1,204,411	1,470,650
Annual passenger-miles (millions)	N/A	295	341	401
Annual IPR seat-miles offered (millions)	N/A	604	604	604
Average number of daily round trip train operations (typical weekday)	N/A	4	4	4
On-time performance (OTP) ² – percent of trains on time at endpoint terminals	N/A	90%	90%	90%
Average train operating delays: minutes of en-route delays per 10,000 train-miles ³	N/A	N/A	N/A	N/A
Top passenger train operating speed (mph)	N/A	110	110	110
Average scheduled operating speed (mph) (between endpoint terminals)	N/A	94.5	94.5	94.5

² ‘On-time’ is defined as within the distance-based thresholds originally issued by the Interstate Commerce Commission, which are: 0 to 250 miles and all Acela trains—10 minutes; 251 to 350 miles—15 minutes; 351 to 450 miles—20 minutes; 451 to 550 miles—25 minutes; and 551 or more miles—30 minutes.

³ As calculated by Amtrak according to its existing procedures and definitions. Useful background (but not the exact measure cited on a route-by-route basis) can be found at pages E-1 through E-6 of Amtrak’s May 2009 Monthly Performance Report at <http://www.amtrak.com/pdf/0905monthly.pdf>

(2) A. Economic Recovery Benefits: *Please limit response to 6,000 characters. For more information, see Section 5.1.1.2 of the HSIPR Guidance.*

Describe the contribution the Corridor Program is intended to make towards economic recovery and reinvestment, including information on the following:

- How the Corridor Program will result in the creation and preservation of jobs, including number of onsite and other direct jobs (on a 2,080 work-hour per year, full-time equivalent basis), and timeline for achieving the anticipated job creation.
- How the different phases of the Corridor Program will affect job creation (consider the construction period and operating period).
- How the Corridor Program will create or preserve jobs or new or expanded business opportunities for populations in Economically Distressed Areas (consider the construction period and operating period).
- How the Corridor Program will result in increases in efficiency by promoting technological advances.
- How the Corridor Program represents an investment that will generate long-term economic benefits (including the timeline for achieving economic benefits and describe how the Corridor Program was identified as a solution to a wider economic challenge).
- If applicable, how the Corridor Program will help to avoid reductions in State-provided essential services.

Acquiring the ROW to the 168 mile segment (S line) is critical to the development of SEHSR and its natural connection to the NEC. This segment is the lynch pin for the culmination of 20+ years of planned incremental investments geared towards completion of the federally designated SEHSR Corridor.

NC has long recognized the importance of investing in the development of intercity passenger rail service; while also being cognizant of the benefits those investments will have on the economic vitality of the state, and the region. On October 19, 2007, the NC House Select committee on Expanding Rail Service made a recommendation to the General Assembly that supports the implementation of passenger service to southeastern and western NC and recommended that it "should consider increasing investments in passenger rail and rail transit to increase choice, reduce high congestion, and promote economic development...the communities in these corridors have demonstrated long-term support for renewal of passenger rail service and have stressed the capacity of passenger rail to provide greater choice and opportunity to their citizens and to promote urban and regional economic development."

A central element of the ARRA legislation, is the rapid mobilization of the U.S workforce and the creation of new high paying jobs. It has been shown that investment in rail transportation and infrastructure will create significant employment benefits. In fact, the USDOT has stated that investment in public transportation creates almost 20% more jobs than similar investment in building roads or highways would.

With the current downturn in the homebuilding and non-residential building industry, construction workers will enjoy a much-needed and significant economic boost with the construction and development elements contained in the SEHSR DC/NEC Corridor program. The economic benefits due to construction activities will accrue to NC and to Va. It is estimated that beginning in 2012 through 2017, a total of 15,055 direct construction activity jobs will be created or preserved in NC and 10,499 direct construction activity jobs will be created or preserved in the Commonwealth of Virginia. Indirect construction activity jobs in the state of NC, as a result of SEHSR DC/NEC from 2012-2017, is projected to be 14,951 and 12,269 in Va. Of the direct jobs created 12,293 will be in the corridor in NC and indirect jobs in the corridor in NC are projected to be 11,353. In total, NC will benefit by the creation or preservation of 30,005 direct and indirect jobs as a result of the construction activities resulting from the various components that comprise this application. Of those, 23,646 will be jobs within the Corridor in NC. Direct and indirect jobs in the Commonwealth of Va will total 22,767, (Richmond MSA (VA) 24,674).

Additionally, as a result of equipment purchases planned for SEHSR, jobs will be created or preserved in the lower 48 states of the US where supplies/materials are provided and/or, equipment is manufactured, and/or where maintenance work is to be performed. Jobs created or preserved related to this work in the US in 2016 and 2017 will be 153 direct and 839 indirect each year – for a total of 1,984 US jobs created or preserved as a net effect of the purchase and/or maintenance of equipment for the SEHSR DC/NEC corridor program.

There will also be significant professional service positions created or preserved as a result of the activities related to SEHSR. It is projected that beginning in 2010 through 2017, 4,961 direct professional service activity jobs will be created in NC, of which 4,798 will be in Raleigh and 6,079 indirect net effect professional services activity jobs will be created during that same period and of

those, 4,938 will be in Raleigh, NC. Overall – SEHSR, from 2010 thru 2017 will create or preserve 11,040 direct and indirect professional services jobs in NC with 1,967 of those jobs coming in the 1st year. (2010)

Operating SEHSR will also create additional employment – direct and indirect. Direct operations and facilities jobs would include; 177 direct jobs comprised of Amtrak and NCDOT employees including; administrative personnel, conductors, assistant conductors, engineers, on-board services, station attendants, mechanical managers and contractors and Amtrak station employees etc. These employees, hired to support service expansion, will spend their wages and create proportional increase in demand for a range of goods and services which project to support the creation or preservation of a total of 397 jobs (indirect) in the corridor communities to operate SEHSR. In total, operating SEHSR will create 574 jobs in the 1st full yr (2018) of operation (177 direct and 397 indirect). 565 of those will be in the corridor and all 574 will be jobs created in NC. The jobs are sustained through the 5th yr of operation and the 10th yr.

Since many NC counties traversed by the Corridor meet the Economically Distressed Area (EDA) criteria, it can be reasonably assumed that there will be EDA workers supported by the elements of the SEHSR corridor program.

The elements of SEHSR will provide strong support for workers located in several EDAs during the construction period. With an avg of 7.04% over the most recent 24 months, NC’s avg. unemployment rate exceeds the US avg. of 6.26% over the same period by over 1 % point. This means that NC itself meets the definition of EDA. These jobs will be created quickly and will provide much-needed support to struggling communities, many of which currently have jobless rates in double digits. NC’s unemployment rate is 10.9% (July 2009), more than a full percentage point above the US avg.

NC is in a unique position of having a large number of military veterans returning to NC after completing their tour of duty. The NC Military Business Center (NCMBC) is working with the Governor’s office to develop employment programs for these veterans.

2B. Job Creation. Provide the following information about job creation through the life of the Corridor Program. Please consider construction, maintenance and operations jobs.

Anticipated number of onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis).	FD/ Construction Period	First full year of operation	Fifth full year of operation	Tenth full year of operation
	43,029	574	574	574

(3) Environmental Benefits. Please limit response to 6,000 characters.

How will the Corridor Program improve environmental quality, energy efficiency, and reduce in the Nation’s dependence on oil? Address the following:

- Any projected reductions in key emissions (CO₂, O₃, CO, PM_x, and NO_x) and their anticipated effects. Provide any available forecasts of emission reductions from a baseline of existing travel demand distribution by mode, for the first, fifth, and tenth years of full operation (*provide supporting documentation if available*).
- Any expected energy and oil savings from traffic diversion from other modes and changes in the sources of energy for transportation. Provide any available information on changes from the baseline of the existing travel demand distribution by mode, for the first, fifth, and tenth years of full operation (*provide supporting documentation if available*).
- Use of green methods and technologies. Address green building design, “Leadership in Environmental and Energy Design” building design standards, green manufacturing methods, energy efficient rail equipment, and/or other environmentally-friendly approaches.

The SEHSR Charlotte to DC/NEC Corridor Program project would improve environmental quality, energy efficiency and contribute toward reducing the Nation’s dependence on oil as summarized below.

Within the United States, transportation is the largest source of greenhouse gas (GHG) emissions after electricity generation. The NCDOT recognizes the importance that rail transportation can play in reducing GHG emissions and improving environmental quality, as rail transportation offers important environmental advantages due to its inherent energy and infrastructure efficiencies, as well as its potential to facilitate sustainable, compact transit-oriented development.

The SEHSR corridor program would shift travel from automobiles, buses and airplanes to intercity passenger rail. The associated environmental benefits include reduced GHG emissions and fuel consumption. Traveling by intercity rail is a greener travel option, per passenger mile, than traveling either by car, bus, or airplane. For example, the average carbon dioxide (CO₂) emissions per passenger mile travelling by rail are 0.18 kilogram (kg), compared with 0.21 kg for car travel and 0.35 kg for air travel (Carbonfund.org, 2007).

Projected reductions in emissions from reduced automobile travel diverted to passenger rail would be realized as a result of the project as summarized in the table below.

Estimated Emissions Reductions in Tons/Year

Key Emissions Variable	First full year of operations (2018)	Fifth full year of operations (2022)	Tenth full year of operations (2027)
CO	780,853	804,298	926,331
CO ₂	12,891	15,311	18,619
VOC	39,758	35,858	30,917
NO _x	63,390	47,565	33,658
PM _{2.5}	965	838	745
PM ₁₀	1,617	1,582	1,591

Within the project area several counties are classified as being in Nonattainment for PM_{2.5} and O₃ 8-hour standard. With regard to PM 2.5 Davidson and Guilford counties in North Carolina are currently in nonattainment. With regard to O₃ Carabus, Mecklenburg and Rowan counties in North Carolina are currently in nonattainment. The estimated emissions reductions from reduced automobile travel diverted to passenger rail realized as a result of the project and as summarized above would contribute towards improving air quality in the project area counties, including those currently in nonattainment.

With regard to potential energy and oil savings, intercity passenger rail consumes 2,586 British thermal units (BTUs) per passenger mile as compared to 3,514 BTUs for personal cars, 3,101 BTUs for airplanes and 4,315 BTUs for buses (DOE, 2009). Thus the project is anticipated to result in energy and oil savings over the no build condition, assisting in reducing the Nation's dependence on domestic and foreign oil.

Leadership in Environmental and Energy Design (LEED) would be implemented for the construction of the proposed stations and associated buildings. The NCDOT would work with each host city to meet the requirements needed to achieve the LEED certified level at a minimum. As a result, the NCDOT would strive to maximize debris diverted from landfills, increase the use of locally manufactured products, reuse or recycle materials and design and construct energy efficient buildings and stations.

Reduction in CO₂ is critical for NC, specifically. Currently, the residents of Durham, NC emit greater than 15% more greenhouse gases (GHG) than the average U.S citizen. In comparison, New York City residents emit an average of 66% less than the national per capita average. (1) Clearly, urban form, i.e. land use and density are critical in making this comparison, but, at the end of the day, NC is striving to reduce CO₂ through intercity passenger rail service. In the longer-term urban form will be developed.

NC has also created voluntary programs that provide incentives for emissions reductions. The NC Division of Air Quality offers Mobile Source Emissions Reduction grants. This program began in 1995, when the NC general Assembly passed Clean Air Legislation providing 1/64 of a cent of each gallon of gasoline for emissions reduction grants. The goal of 2008 grants was to reduce emissions from diesel engines, particularly VOC and NO_x which contribute to the formation of ozone. (2)

An innovative concept in which North Carolina is an active participant, and which adds benefits to the Piedmont Corridor, and SEHSR corridor as a whole, now and into the future, is that of entering into agreements and State partnerships with fellow SESH states; Virginia, South Carolina, Georgia and Florida to provide a seamless transition for multi-state environmental and design documentation related to the high-speed rail program – once again improving efficiency and effectiveness.

“The technical literature confirms what common sense dictates – people drive less in places with rich transportation choices. The empirical evidence shows that a typical resident of a traditional, walkable neighborhood emits significantly less transportation GHG emissions than typical auto-oriented development – 30 percent lower on average. For example, there is 40

percent lower VMT in Chapel Hill, NC's Southern Village and 59 percent lower in Atlanta's Atlantic Station development than the regional average.”(3)

(1) ICLEI Energy Services. 2007. Greenhouse gas and criteria air pollutant emissions inventory and local action plan for emission reductions <http://www.durhamnc.gov/ghg/pdf/ghg_lap_full_report.pdf>.

(2) N.C. DENR. 2008. 2008 Mobile Source emission reduction grants: Application package. <http://daq.state.nc.us/motor/ms_grants/Application2008.pdf>.

(3) Ewing, Reid, Keith Bartholomew, Steve Winkelman, Jerry Walters and Don Chen, 'Growing Cooler :The Evidence on Urban Developme

(4) Livable Communities Corridor Program Benefits Narrative. *(For more information, see Section 5.1.1.3 of the HSIPR Guidance, Livable Communities). Please limit response to 3,000 characters.*

How will the Corridor Program foster Livable Communities? Address the following:

- Integration with existing high density, livable development: Provide specific examples, such as (a) central business districts with walking/biking and (b) public transportation distribution networks with transit-oriented development.
- Development of intermodal stations: Describe such features as direct transfers to other modes (both intercity passenger transport and local transit).

NCDOT's Mission, "Connecting people and places in North Carolina – safely and efficiently, with accountability and environmental sensitivity" directly relates to multimodal connectivity which, in itself, plays a large part in support of sustainable and "livable communities". Connectivity provides a seamless transportation experience and is a critical component in NCDOT's mission. As passenger rail service grows and as energy costs rise and viable transportation choices are sought; multi-modal connectivity will grow in importance.

NCDOT promotes "livable communities" in other innovative ways such as; promoting community activity within the confines of the stations as well as in the surrounding areas. One such example, NCDOT's unique, Station Host Program, which is in its' infancy stages, having already begun in Charlotte and Raleigh; it will expand statewide as the program matures. This program is designed to assist passengers with travel questions and information during time spent at the train station. Station hosts complement the jobs of station agents and NCDOT Station Attendants. These hosts help visitors feel comfortable by providing a "station experience" and by providing helpful local information before passenger's board and after passengers detrain. They make the passengers feel a part of the community. As this segment is developed, programs like the Station Host Program would likely continue and expand to bring these communities together along the areas served by the new service.

Major community centers all along the corridor will become more accessible and North Carolina will become – more connected – fully in line with its Mission. Cultural centers will grow and Tourism will grow as more frequencies become available and more destinations become accessible to passengers. North Carolina is a state with a tremendous history and a state which values and preserves its history (as seen in its station restoration program).

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E. Application Success Factors

(1) Project Management Approach and Applicant Qualifications Narrative. *Please provide separate responses to each of the following. Additional information on program management is provided in Section 5.1.2.1 of the HSIPR Guidance, Project Management.*

1A. Applicant qualifications.

Management experience: Does the applicant have experience in managing rail investments and Corridor Programs of a similar size and scope to the one proposed in this application?

- Yes - Briefly describe experience (brief project(s) overview, dates)
 No- Briefly describe expected plan to build technical and managerial capacity. Provide reference to Project Management Plan.

Please limit response to 3,000 characters.

Since 2001, NC has invested \$100 million in grade crossing improvements, \$47 million in track improvements, and \$64 million in station improvements with additional ongoing programs budgeted for \$174 million in state funding.

North Carolina Railroad (NCR) owns 317 miles of track from Morehead City, NC to Charlotte, leased for Norfolk Southern freight services. NSR maintains it, including for passenger services up to 90MPH. NCR's financial situation is strong, with no debt, and revenue exceeding \$20 million annually.

NCDOT views the interim expenditures as an investment in the future to obtain in a timely way the necessary equipment for full operations.

NCDOT has an extensive record of successfully planning, designing, constructing and operating major rail projects. The state has made capital and operating investments in rail service since it began supporting Amtrak service in 1994.

Examples include:

- North Carolina Railroad Improvement Project (NCRIP) - The NCDOT is investing state and federal funds to upgrade tracks and signals in the NCR corridor. The program includes major track and signal work totaling over \$150 million. Work on NCRIP began in 2001 and 9 projects totaling over \$30 million have been completed.
- Global TransPark GTP is a large industrial site in Eastern NC. NCDOT is constructing 5.8 miles of new track, including a railway bridge and 10 roadway crossings, to provide rail access for a major manufacturing facility. NCDOT has adopted an ultra-expedited approach to plan, design and construct the line in 3 years. Environmental documentation and FD are being developed concurrently and construction is expected to begin in early 2010, 16 months after project initiation.
- Equipment Procurement & Rehabilitation - NCDOT procures and refurbishes rail locomotives and passenger cars. NCDOT writes the specifications, solicits proposals, awards contracts, manages the work and inspects and tests the vehicles for final acceptance.
- Equipment Maintenance - NCDOT owns the trains used for the Piedmont service. This equipment is maintained at NCDOT maintenance facilities. NCDOT contracts with Herzog to maintain their rail equipment. The NCDOT Rail Operations Manager oversees the equipment maintenance functions performed by the contractor.
- Stations - NCDOT is upgrading all of the stations in the state. Sixteen stations have been renovated and 2 new stations have been built. NCDOT works with the localities to develop attractive station facilities that provide a welcoming gateway to the rail system and serve as key focal points in the communities.

Ultimately, SEHSR will be an extension of existing NC services linking them to Amtrak's NEC HSR services. Convenience, reliability and travel time are three main ingredients for its success. Eventually, SEHSR plus conventional train revenues are expected to handily exceed O&M costs for all state-supported services, per forecasts made by Amtrak.

1B. Describe the organizational approach for the different Corridor Program stages included in this application (e.g., final design, construction), including the roles of staff, contractors and stakeholders in implementing the Corridor Program. For construction activities, provide relevant information on work forces, including railroad contractors and grantee contractors. Please limit response to 3,000 characters.

NCDOT is responsible for planning and implementing all modes of transportation in the state. NCDOT was reorganized in 2008 to align its business units along functional lines to make the agency more strategically oriented, accountable, efficient and effective in implementing transportation projects. This new alignment eliminates redundancies and de-layers the organization and focuses the agency on outcomes-based performance.

The Rail Division is responsible for rail programs, including the planning, implementation and operation of passenger service, station improvements, grade crossing safety, industrial access and corridor preservation. The Division has extensive experience in delivering projects both by using its own staff and by hiring and managing contractors.

The Rail Division has several rail consulting firms under on-call contracts to insure availability of specialized rail resources. Contractors are available to perform specialized planning and performance analysis studies, final design engineering and construction management.

NCDOT will utilize professional engineering contractor services for FD work. In some cases NCDOT may contract directly with the railroad owners and they will use their own forces to perform the FD work. In either case, NCDOT staff will manage these consultant contracts to ensure that the work is done to meet quality standards on budget and on schedule.

Different project delivery approaches are used to construct projects, depending on the project type. For work on active railroads, NCDOT will contract directly with the owning railroads which will do the work either with their own forces or through force accounts. For projects that are adjacent to, or completely off of an active railroad, NCDOT will procure and manage contractors. Coordination with key stakeholders, including railroads, localities and adjacent property owners is a critical role conducted by NCDOT staff on all projects.

1C. Does any part of the Corridor Program require approval by FRA of a waiver petition from a Federal railroad safety regulation? (Reference to or discussion of potential waiver petitions will not affect FRA's handling or disposition of such waiver petitions).

YES- If yes, explain and provide a timeline for obtaining the waivers

NO

Please limit response to 1,500 characters.

1D. Provide a preliminary self-assessment of Corridor Program uncertainties and mitigation strategies (consider funding risk, schedule risk and stakeholder risk). Describe any areas in which the applicant could use technical assistance, best practices, advice or support from others, including FRA. Please limit response to 2,000 characters.

In addition to funding, risks include:

- Equipment – NC DOT has managed several highly successful locomotive and coach rebuilds. Meticulous attention to contract development, monitoring, testing and acceptance provide the needed tools to conduct a successful procurement. Networking with other states will allow careful consideration of the financial benefits of economies of scale.
- Schedule – Concern exists regarding time slots through VA and onto the NEC. NCDOT is in close communication with AMTRAK and CSXT to minimize this risk.
- Material Prices – Volatility in material prices is one aspect of a long-term recession. A mature understanding of material costs and provision of adequate contingencies will contribute to resolving changes.
- Standards – Because the project is based on all existing FRA requirements and industry best practices, success,

timing, and cost are not predicated on waivers. This reduces risk.

- Construction Practices – Over the past decade NCDOT has partnered with host railroads to develop and deliver an on-going series of rail construction projects. The plan calls for construction by the host railroad and its subcontractors, augmented by contractors and private engineering firms through contracts with NCDOT. Railroad force accounts and continuing contracts will be used. This will allow prompt purchase of material and mobilization of labor. Long lead time components will be specified and ordered prior to construction, such as turnouts and signal components.

Recent experience has shown increases in the cost of delivering rail projects, particularly in the area of materials and supplies. NCDOT mitigates this risk by using conservative budget estimates, reasonable contingency limits, and lump sum or not to exceed contracts with established completion dates. The state has demonstrated through its long history of funding rail capital and operating projects its willingness to provide adequate funding to insure project completion.

(2) Stakeholder Agreements Narrative. *Additional information on Stakeholder Agreements is provided in Section 5.1.2.2 of the HSIPR Guidance.*

Under each of the following categories, describe the applicant's progress in developing requisite agreements with key stakeholders. In addition to describing the current status of any such agreements, address the applicant's experience in framing and implementing similar agreements, as well as the specific topics pertaining to each category.

2A. Ownership Agreements – Describe how agreements will be finalized with railroad infrastructure owners listed in the “Right-of-Way Ownership” and “Service Description” tables in Section B. If appropriate, “owner(s)” may also include operator(s) under trackage rights or lease agreements. Describe how the parties will agree on Corridor Program design and scope, benefits, implementation, use of Corridor Program property, maintenance, scheduling, dispatching and operating slots, Corridor Program ownership and disposition, statutory conditions and other essential topics. Summarize the status and substance of any ongoing or completed agreements. *Please limit response to 3,000 characters.*

NCDOT staff has negotiated very successfully with the operating railroads over the past 20 years or more. This success has been based on a thorough understanding of the issues on both sides of the table and the reality of the negotiation process. Our understanding of operating, financing and maintenance issues, among others, is augmented where necessary by experienced consultants that have additional experience dealing with typical and extraordinary railroad issues that are encountered with every project.

NCDOT has solid base agreements in place that deal with the most standard issues among the parties and have a number of site-specific, executed agreements in place that provide for short-term and longer-term items, as well as provide for ways to deal with issues that can develop over time that were not originally anticipated.

North Carolina further invested \$71 million for outstanding shares of the NC Railroad. The state owns 100% of the shares, which promote economic development and to ensure access to the railroad for passenger trains. The master agreement covers commuter, intercity and high speed passenger rail service.

NCRB has granted to NS exclusive freight trackage rights over the lines and properties of NCRB thereby extending to NS the exclusive right to conduct freight operations over its lines and properties, including performance of local freight service on those lines and properties.

NCDOT currently has an executed master agreement with CSXT to establish terms, conditions and responsibilities for designing and constructing passenger projects on CSXT-owned rail corridor.

NC has a contract agreement with Herzog Company to maintain their equipment to FRA standards.

2B. Operating Agreements – Describe the status and contents of agreements with the intended operator(s) listed in “Services” table in the Application Overview section above. Address Corridor Program benefits, operation and financial conditions, statutory conditions, and other relevant topics. *Please limit response to 3,000 characters.*

Amtrak: NCDOT has a contractual agreement with the Amtrak to subsidize the operations of the Carolinian and Piedmont trains. Under this agreement, which is renewed annually, NCDOT is responsible for covering all of the losses incurred in the operation of these trains. NCDOT makes payments to Amtrak one month in advance, and quarterly adjustments are made to reflect actual revenues and fuel costs. As part of the agreement with Amtrak, NCDOT owns and maintains the rail equipment used to operate the Piedmont service between Charlotte and Raleigh. NCDOT has a fleet of refurbished passenger coaches and locomotives which it stores and maintains in Capital Yard in Raleigh.

Norfolk Southern Railway: On July 27, 1999, NCRB and NS entered into a master agreement to provide for NS's continued operations on the NCRB. This agreement gives NS the exclusive right to conduct freight operations over the lines and properties of NCRB including performance of local freight service. NCRB also granted to NS such operating rights on NCRB ROW as will permit continuation of the existing operations of Amtrak service on NCRB. The master agreement has a length of 15 years, with two additional 15 year option periods.

The master agreement provides for prioritization of passenger service in the NCRR corridor. The agreement requires NS to give priority to scheduled passenger trains over freight trains and provides for a procedure to resolve any disputes about how trains are dispatched. The master agreement expressly permits the operation of trains at speeds up to 90 mph. Trains can operate at speeds faster than 90 mph only if they are on dedicated separate infrastructure on the right of way and dispatched and maintained by a party other than NS.

If any passenger service or any third-party passenger operations are added to the NCRR line, the passenger service operator or other third-party passenger operator is required to make and pay for capital improvements on the line adequate to assure that none of NS's capacity, either the capacity NS is currently using or unused capacity that is available to NS, is diminished or disadvantaged.

CSXT: NCDOT has recently developed a master agreement with CSXT which establishes terms, conditions, and responsibilities for designing and constructing passenger rail projects on CSXT.

The master agreements also provide for the implementation of NCDOT's Rail Impact program, a package of improvements designed to increase passenger speeds, while not adversely affecting freight operations.

2C. Selection of Operator – If the proposed operator railroad was not selected competitively, please provide a justification for its selection, including why the selected operator is most qualified, taking into account cost and other quantitative and qualitative factors, and why the selection of the proposed operator will not needlessly increase the cost of the Corridor Program or of the operations that it enables or improves. *Please limit response to 3,000 characters.*

The State of North Carolina has been financially supporting Amtrak service since 1990. Amtrak currently operates three frequencies in the Piedmont Corridor, thus making Amtrak the most efficient choice in providing additional passenger rail service. The State intends to continue to use Amtrak as its HSIPR operator.

As additional service frequencies are offered, Amtrak expects NCDOT to obtain the requisite equipment for additional service. NCDOT intends to acquire the additional motive power, rolling stock, and construct the maintenance and repair facilities necessary to accommodate the additional service.

2D. Other Stakeholder Agreements – Provide relevant information on other stakeholder agreements including State and local governments. *Please limit response to 3,000 characters.*

NCDOT has endeavored to work with all stakeholders who are affected by the introduction of HSIPR. These include: communities owning rail stations, landowners, transit systems, and businesses.

In Charlotte, NCDOT has been working with the city, Charlotte Area Transit System (CATS), and area businesses who are impacted by the ACWR relocation project and the Charlotte Gateway Station project. Charlotte has signed an MOU supporting the roadway closures part of CRISP. With regard to CATS, there is a presentation on October 12 which should result in a Resolution of Support for CRISP.

CATS is very supportive of the CRISP program as it is designed to benefit the introduction of their commuter rail efforts as well as their existing bus service. The City of Charlotte or NCDOT owns the area roads and supports grade separations where they are proposed. The city wholeheartedly supports construction of the Charlotte Gateway station.

Station ownership is mixed with most controlled by the respective city or the state. In all instances license agreements exist between the various parties to permit the existing use and future station improvements. As part of its station program, NCDOT negotiates agreements with localities that govern construction or renovation. These agreements establish partnerships for the capital phase of the projects permitting the state and locality to work together to complete station construction and renovations. The agreements establish the terms for turning over the station to the municipality for ongoing management, operation and maintenance once construction is complete.

Across the corridor NCDOT works with municipalities or other property owners impacted by rail improvements and subsequently enters into a stakeholder agreement. If an agreement is unable to be reached, NCDOT has condemnation powers.

SEHSR Corridor states (VA, NC, GA, FL, SC) executed an MOU to initiate studies on the corridor in 8/1994. NC agreed to take the lead role with information and financial support coming from the other states. This MOU has served as a foundation for work that has led to a ROD, issued by FRA on 10/2002.

North Carolina and Virginia both passed legislation in 2004 to create the Virginia - North Carolina Interstate High-Speed Rail Compact. The compact consists of five members from VA and five members from NC whose purpose it is to study, coordinate efforts, advocate and secure funding and resources for HSIPR services in the southeast.

2E. Agreements with operators of other types of rail service - Are benefits to non-intercity passenger rail services (e.g., commuter, freight) foreseen? Describe any cost sharing agreements with operators of non-intercity passenger rail service (e.g., commuter, freight). *Please limit response to 3,000 characters.*

As the corridor is improved to accommodate additional high speed passenger train frequencies, capacity on the corridor will increase that will benefit both freight and passenger train operations. Benefits include improved on time performance, safety, efficiency and improved operating speeds.

NCDOT is currently in active discussions with the railroad owners seeking cost sharing agreements; however, the railroads view the capacity improvements as necessary measures to provide HSIRP service and do not consider the improvements to be critical to their network or operations.

Per NCGS directive 136-20, the NCDOT Secretary of Transportation is empowered to assess the net benefits of constructing grade separations and assessing railroad companies up to 10 percent of the project's cost. NCDOT cost-shares with freight railroads on a case by case basis. Where there is a project benefit to both the freight railroad and to NCDOT's rail passenger program, NCDOT endeavors to negotiate cost-sharing. This is accomplished by NCDOT and the benefitting railroad(s) entering into a project agreement which commits the railroad(s) to cost sharing contributions and in-kind services. NCDOT intends to continue using project agreements, more specifically, master agreements and addendums/supplementals, in this regard.

As mentioned in E2D above, CATS is supportive of NCDOT's HSIPR initiative. CATS plans to use a portion of the NCRP corridor for commuter rail service. Cost sharing discussions between NCDOT, NCRP and CATS have occurred and are ongoing.

(3) Financial Information

3A. Capital Funding Sources. Please provide the following information about your funding sources (if applicable).

Non FRA Funding Sources	New or Existing Funding Source?	Status of Funding ⁴	Type of Funds	Dollar Amount (millions of \$ YOE)	% of Program Cost	Describe uploaded supporting documentation to help FRA verify funding source
Other Federal	Existing	Committed	Capital	22.0	0.5	See application attachment
NC State	Existing	Committed	Capital	4.0	0.1	See application attachment
Local	New	Committed	Capital	4.0	0.1	See application attachment
	New	Committed				

⁴ Reference Notes: The following categories and definitions are applied to funding sources:

Committed: Committed sources are programmed capital funds that have all the necessary approvals (e.g. legislative referendum) to be used to fund the proposed phase without any additional action. These capital funds have been formally programmed in the State Rail Plan and/or any related local, regional, or State Capital Investment Program CIP or appropriation. Examples include dedicated or approved tax revenues, State capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed phase, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed phase.

Budgeted: This category is for funds that have been budgeted and/or programmed for use on the proposed phase but remain uncommitted, i.e., the funds have not yet received statutory approval. Examples include debt financing in an agency-adopted CIP that has yet to be committed in their near future. Funds will be classified as budgeted where available funding cannot be committed until the grant is executed, or due to the local practices outside of the phase sponsor's control (e.g., the phase development schedule extends beyond the State Rail Program period).

Planned: This category is for funds that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, requests for State/local capital grants, and proposed debt financing that has not yet been adopted in the agency's CIP.

3B. Capital Investment Financial Agreements. Describe any cost sharing contribution the applicant intends to make towards the Corridor Program, including its source, level of commitment, and agreement to cover cost increases or financial shortfalls. Describe the status and nature of any agreements between funding stakeholders that would provide for the applicant's proposed match, including the responsibilities and guarantees undertaken by the parties. Provide a brief description of any in-kind matches that are expected. *Please limit response to 3,000 characters.*

NCDOT has had great success in undertaking projects with the railroads by entering into project agreements, which commit the railroads to cost sharing contributions and in-kind services. NCDOT intends to continue using project agreements, more specifically, master agreements and addendums/supplementals, in this regard. In-kind services such as flagging, engineering design and oversight, etc. may be among the contributions from the railroad. North Carolina will provide in-kind services, including project management and oversight, administrative support, and access to the NCRR.

Concerning project overruns, NCDOT intends to commit to conservative budgeting and lump sum agreements with contractors, thus minimizing potential financial shortfalls. The state has demonstrated through its long history of funding rail capital and operating projects its willingness to provide adequate funding to cover any project shortfalls.

Per NCGS directive 136-20, the NCDOT Secretary of Transportation is empowered to assess the net benefits of constructing grade separations and assessing railroad companies up to 10 percent of the project's cost. NCDOT cost-shares with freight railroads on a case by case basis. Where there is a project benefit to both the freight railroad and to NCDOT's rail passenger program, NCDOT endeavors to negotiate cost-sharing. This is accomplished by NCDOT and the benefitting railroad(s) entering into a project agreement which commits the railroad(s) to cost sharing contributions and in-kind services. NCDOT intends to continue using project agreements, more specifically, master agreements and addendums/supplementals, in this regard

In its prioritized capital plan, NCDOT identifies all matching funds proposed to be used for each project. NCDOT and NCRR have made contributions to developing this program to the best of their ability. NCDOT will continue to provide administrative oversight of the program and NCRR is required by statute to reinvest in its railroad infrastructure.

3C. Corridor Program Sustainability and Operating Financial Plan.

Please report on the Applicant's projections of future financial requirements to sustain the service by completing the table below (in YOE dollars) and answering the following question. Describe the source, nature, share, and likelihood of each identified funding source that will enable the State to satisfy its projected financial support requirements to sustain the operation of the service addressed in this Corridor Program. *Please limit response to 2,000 characters.*

NC owns the NCRR, which is leased to NS, which in turn maintains it. NCRR's financial position is strong, with no debt and \$20 million in rental income. NCDOT's Operating Financial Plan (OFP) in its Service Development Plan shows the fractional passenger maintenance expense and the capital asset renewal charge (CARC) for the 175 miles used by passenger trains. Since 2001, NC has invested \$200 Million in rail improvements, with future programs budgeted at \$174 Million.

SEHSR augments and extends NC services, linking them to Amtrak's NEC. Frequency, convenience, speed and reliability are key variables of the Amtrak Model used by NCDOT to forecast ridership and revenue. When SEHSR comes online, total revenues are expected to exceed O&M costs for all State supported services using conservative yields per passenger mile.

In addition:

- If operating shortfalls occur, NCDOT will fund these shortfalls. NCDOT has statutory authority to use State funds to support rail development and a mandate to increase the proportion of the State transportation budget devoted to passenger rail.
- NCDOT has entered into MOU's with NS and CSXT to accomplish mutually beneficial "matches".
- NCDOT can enter into PPP's. Station developments are particularly amenable to these, notably 32 acres that make up the Charlotte Gateway Station.
- Additionally, the OFP shows a significant positive earnings before interest, taxes, depreciation and amortization, indicating the possibility for a PPP concerning operations.

- NC recently sold its second series of Garvee bonds rated AA by Fitch and S&P and As3 by Moodys, allowing NC to capitalize on future transportation revenue to fund current investments.

Note: Please enter supporting projections in the Track 2 Application Supporting Forms, and submit related funding agreements or other documents with the Supporting Materials described in Part G of this Track 2 Application. The numbers entered in this table must agree with analogous numbers in the Supporting Forms.

Funding Requirement (as identified on the Supporting Form)	Baseline Actual-FY 2009 Levels (State operating subsidy for FY 2009 if existing service)	Projected Totals by Year (\$ Millions Year Of Expenditure (YOE)* Dollars - One Decimal)		
		First full year of operation	Fifth full year of operation	Tenth full year of operation
Indicate the Fiscal Year	2009	2018	2022	2027
Surplus/deficit after capital asset renewal charge ⁵		33.8	48.6	70.9
Total Non-FRA sources of funds applicable to the surplus/deficit after capital asset renewal		0	0	0
Funding Requirements for which Available Funds Are Not Identified		0	0	0

* Year-of-Expenditure (YOE) dollars are inflated from the base year. Applicants should include their proposed inflation assumptions (and methodology, if applicable) in the supporting documentation.

Note: Data reported in this section should be consistent with the information provided in the Operating and Financial Performance supporting form for this application.

⁵ The “capital asset renewal charge” is an annualized provision for **future** asset replacement, refurbishment, and expansion. It is the annualized equivalent to the “continuing investments” defined in the FRA’s Commercial Feasibility Study of high-speed ground transportation (*High-Speed Ground Transportation for America*, September 1997, available at <http://www.fra.dot.gov/us/content/515> (see pages 5-6 and 5-7).

(4) Financial Management Capacity and Capability – Provide audit results and/or other evidence to describe applicant capability to absorb potential cost overruns, financial shortfalls identified in 3C, or financial responsibility for potential disposition requirements (include as supporting documentation as needed). Provide statutory references/ legal authority to build and oversee a rail capital investment. *Please limit response to 3,000 characters.*

From 2001 to now, NC has invested \$100 million in grade crossing improvements, \$47 million in track improvements, and \$64 million in station improvements with additional ongoing programs budgeted for \$174 million in state funding. North Carolina Railroad (NCRR) owns 317 miles of track from Morehead City, NC to Charlotte, leased for Norfolk Southern freight services. NSR maintains it, including for passenger services up to 90MPH. NCRR’s financial situation is strong, with no debt, and revenue exceeding \$20 million annually.

SEHSR passenger service revenues are projected to exceed O&M expenses in the first full year of implementation.

SEHSR will be an extension of existing NC services linking them to Amtrak’s NEC HSR services. Convenience, reliability and travel time are three main ingredients for its success. Eventually, SEHSR plus conventional train revenues are expected to handily exceed O&M costs for all state-supported services, per forecasts made by Amtrak.

(5) Timeliness of Corridor Program Completion – Provide the following information on the dates and duration of key activities, if applicable. For more information, see Section 5.1.3.1 of the HSIPR Guidance, Timeliness of Corridor Program Completion.

Final Design Duration:	45 months
Construction Duration:	63 months
Rolling Stock Acquisition/Refurbishment Duration:	18 months
Service Operations Start date:	10/2017 (mm/yyyy)

(6) If applicable, describe how the Corridor Program will promote domestic manufacturing, supply and industrial development, including furthering United States-based equipment manufacturing and supply industries. *Please limit response to 1,500 characters.*

With the development of this corridor - including the 168 mile segment for which the ROW is to be acquired, and the elements to be constructed now, and in the future, will generate growth in manufacturing supply companies and industrial development across the country. As HSIPR service is implemented and ridership grows – substantial long term growth will spur equipment manufacturing and supply needs – promoting industry growth - locally, regionally and nationally.

In the short term, the project elements, described in this application, will involve a significant variety of materials and other resources. Equipment and materials such as frogs, signal equipment, plates, switches and rail will be purchased from U.S. vendors and supply industries to the greatest extent possible.

Based on a close working relationship with Norfolk Southern Railway, we can anticipate that the following resources will be acquired: ties (Roanoke, VA and Montevallo, AL); tie plates (Newport, AR); railroad spikes (Caskey, SC); anchors (Atchinson, KS); and rail (either Colorado or Bethlehem, PA). While some small turnout components are made in China, NS has used a domestic provider in the past when required. As to the major turnout material itself, components will likely be acquired from vendors in Birmingham, AL or Cleveland, OH or Memphis, TN.

(7) If applicable, describe how the Corridor Program will help develop United States professional railroad engineering, operating, planning and management capacity needed for sustainable IPR development in the United States. *Please limit response to 1,500 characters.*

The development of the SEHSR Charlotte to DC/NEC Corridor will lead to the need for additional railroad technicians, civil engineers trained in rail disciplines as well as planners, rail system operators and managers. There is a nationwide shortage within the State DOTs and within the industry itself. Universities are not focusing on rail studies and have not done so in

years. Institutional barriers are evident in civil service hiring practices among DOTs – states will need technical support. The American Association of State Highways and Transportation Officials (AASHTO) through its Standing Committee on Rail Transportation (SCORT), chaired by NCDOT’s Secretary of Transportation, Gene Conti, is undertaking an effort to develop a national program (working with FRA) to provide states with technical support to begin to address the many workforce development challenges they face today and to work towards resolving capacity issues the states and the industry will contend with as they prepare, in partnership, to deliver the most robust rail program in the nation’s history. This October, with the guidance of SCORT, AASHTO expects to amend its 5 year Strategic Plan to include 2 Goals related to this issue: 1.) Promote the development of a National High Speed and Intercity Passenger Rail Network and 2.) Develop technical services to support state rail programs for freight and high speed and intercity passenger rail.

Corridor Program Name: NC T2.4 - SESHHR - Charlotte to DC/NEC Date of Submission: 10/02/09 Version Number: C

F. Additional Information

- (1) **Please provide any additional information, comments, or clarifications and indicate the section and question number that you are addressing** (e.g., Section E, Question 1B). *This section is optional.*

B3: It is NCDOT's policy to aggressively seek match dollars to leverage all federal funds including the ARRA dollars we are requesting currently. NCDOT will continue to actively pursue, state, local and private match in this vein. For example, NCDOT just completed negotiations with the NCRF whereby NCRF has committed \$13 million in additional match to complete the double-tracking of the NS mainline (the P Line) between Greensboro and Charlotte. This match commitment was obtained on 10/1/2009 after the production deadline for completing the FRA required financial forms for this application.

Corridor Program Name: NC T2.4 - SESHR - Charlotte to DC/NEC Date of Submission: 10/02/09 Version Number: C

G. Summary of Application Materials

Note: In addition to the requirements listed below, applicants must comply with all requirements set forth in the HSIPR Guidance and all applicable Federal laws and regulations, including the American Recovery and Reinvestment Act of 2009 (ARRA) and the Passenger Rail Investment and Improvement Act of 2008 (PRIIA).

Application Forms	Required for Corridor Programs	Required for Projects [See Note Below]	Reference	Comments
<input type="checkbox"/> This Application Form	✓		HSIPR Guidance Section 4.3.3.3	
<input type="checkbox"/> Corridor Service Overview (Same Corridor Service Overview may be used for multiple applications)	✓		HSIPR Guidance Section 4.3.3.3	
Supporting Forms <i>(Forms are provided by FRA on Grant Solutions and the FRA website)</i>	Required for Corridor Programs	Required for Projects [See Note Below]	Reference	Comments
<input type="checkbox"/> General Info	✓	✓	HSIPR Guidance Section 4.3.5	FRA Excel Form
<input type="checkbox"/> Detailed Capital Cost Budget	✓	✓	HSIPR Guidance Section 4.3.5	FRA Excel Form
<input type="checkbox"/> Annual Capital Cost Budget	✓	✓	HSIPR Guidance Section 4.3.5	FRA Excel Form
<input type="checkbox"/> Operating and Financial Performance and Any Related Financial Forms	✓		HSIPR Guidance Section 5.3.5	FRA Excel Form
<input type="checkbox"/> Program or Project Schedule	✓	✓	HSIPR Guidance Section 4.3.5	FRA Excel Form

Supporting Documents <i>(Documents to be generated and provided by the applicant)</i>	Required for Corridor Programs	Required for Projects [See Note Below]	Reference	Comments
<input type="checkbox"/> Map of Corridor Service	✓		Corridor Service Overview Question B.2	
<input type="checkbox"/> Service Development Plan	✓		HSIPR Guidance Section 1.6.2	
<input type="checkbox"/> “Service” NEPA	✓		HSIPR Guidance Section 1.6.2	
<input type="checkbox"/> Project Management Plan	✓		HSIPR Guidance Section 4.3.3.2	
<input type="checkbox"/> “Project” NEPA (Required before obligation of funds)		✓	HSIPR Guidance Section 1.6.2	
<input type="checkbox"/> PE Materials	✓	✓	HSIPR Guidance Section 1.6.2	
<input type="checkbox"/> Stakeholder Agreements	✓	✓	HSIPR Guidance Section 4.3.3.2	
<input type="checkbox"/> Financial Plan	✓	✓	HSIPR Guidance Section 4.3.3.2	
<input type="checkbox"/> Job Creation	✓	✓	HSIPR Guidance Section 1.6.2	
Standard Forms <i>(Can be found on the FRA website and www.forms.gov)</i>	Required for Corridor Programs	Required for Projects [See Note Below]	Reference	Comments

<input type="checkbox"/> SF 424: Application for Federal Assistance	✓		HSIPR Guidance Section 4.3.3.3	Form
<input type="checkbox"/> SF 424C: Budget Information-Construction	✓		HSIPR Guidance Section 4.3.3.3	Form
<input type="checkbox"/> SF 424D: Assurances-Construction	✓		HSIPR Guidance Section 4.3.3.3	Form
<input type="checkbox"/> FRA Assurances Document	✓		HSIPR Guidance Section 4.3.3.3	Form
<p>Note: Items checked under “Corridor Programs” are required at the time of submission of this Track 2 Corridor Programs application. Items checked under “Projects” are optional at the time of submission of this Track 2 Corridor Programs application, but required prior to FD/Construction grant award.</p>				

PRA Public Protection Statement: Public reporting burden for this information collection is estimated to average 16 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is **2130-0583**.