RECORD OF DECISION
FOR THE
TIER I SOUTHEAST HIGH SPEED RAIL PROJECT

This document records the decision of the Federal Railroad Administration (FRA) and the Federal Highway Administration (FHWA) with regard to the proposed Southeast High Speed Rail (SEHSR) project from Washington, DC to Charlotte, NC. In making this decision, the agencies considered the information, analysis, and public comments contained in the Tier I Draft and Final Environmental Impact Statements for the proposed Southeast High Speed Rail Project.

This Record of Decision (ROD) has been drafted in accordance with the regulations implementing the National Environmental Policy Act (NEPA), Title 40 Code of Federal Regulations, Part 1505.2, *Record of decision in cases requiring environmental impact statements* (40 CFR § 1505.2). Specifically, this ROD:

- Provides a background of the NEPA process for the Tier I Environmental Impact Statement (EIS); (See pages 2-4)
- Summarizes comments on the SEHSR EIS; (See pages 4-11)
- States the FRA's and the FHWA's decision specifying the preferred alternative; (See page 11)
- Presents the comparative evaluation of the study area alternatives and how the preferred alternative was selected; (See pages 11-16) and
- Summarizes practicable means to avoid or minimize environmental harm from the selected alternative that will be explored during the Tier II process. (See pages 16-17)

INTRODUCTION

The proposed Southeast High Speed Rail (SEHSR) project would extend high speed rail service from the Northeast Corridor (NEC) southward along a designated high speed rail corridor from Washington, DC to Charlotte, NC. The proposed service would consist of four round trips per day between Charlotte and Washington and four additional trips between Raleigh and Charlotte. Nine study area alternatives and one no-build alternative were examined for the proposed corridor. The estimated end-to-end travel time for the nine alternatives ranges from 6 hours to 7.5 hours, compared to 10 hours for the no-build alternative. The projected total ridership in 2025 for the nine alternatives ranges from 1.3 million to 1.8 million passengers. Projected net operating contributions range from a $22.497 million gain to a $2.44 million loss. Fossil fuel powered trains are proposed to be used with a top operating speed of 110 mph (180 kph).

Since the SEHSR could potentially be funded with federal funds and may require federal permits, an Environmental Impact Statement process was required, pursuant to the NEPA.

Because of the magnitude of the project study area, approximately 500 miles long, and the conceptual level of project detail, the North Carolina Department of Transportation (NCDOT) Rail Division, Virginia Department of Rail and Public Transportation (VDRPT), and the federal partners chose a "tiered" approach in developing the environmental documents for this project. This Tier I Environmental Impact Statement (EIS) is a program level environmental document that presents a corridor level review of the study area alternatives. All known potential impacts (environmental resources) are presented at the macro level in order to determine the general

location for further study. The buffer area used to analyze each resource to help identify potential impacts ranged from a width of 300 feet to six miles. The estimated total potential impacts discussed in the SEHSR Tier I EIS represents the known resources that exist within the defined buffer. The broad buffer areas allow for avoidance and minimization during subsequent Tier II studies. Actual impacts would be reduced based upon the footprint of the final design.

Tier II environmental documents will be initiated once refined high speed rail programs are developed by North Carolina and Virginia. These final plans will identify the specific actions needed in each state to fully implement high speed rail in the selected build alternative corridor, including the identification of specific alignments, station locations, the number of train stops, detailed environmental and engineering analyses, and more accurate capital cost estimates. Schedules for the Tier II actions will be developed and initiated. During the Tier II efforts, detailed agency coordination will take place including the securing of permits following the appropriate environmental documentation. The Tier II environmental documents will provide a more precise and detailed environmental impact analysis, which will evaluate specific segments of the preferred study area alternative with additional research, coordination, and field surveys. Reduced buffer widths and avoidance/minimization activities will be identified during the Tier II process and are expected to substantially lower potential impacts for the preferred alternative. The anticipated type of site specific environmental documentation (Categorical Exclusion, Environmental Assessment/Finding of No Significant Impact, or Environmental Impact Statement/Record of Decision) needed for each action, or group of actions, will be determined by the NCDOT and the VDRPT in conjunction with the FRA and the FHWA, and a phased program of project development will then be established based on the availability of resources and on the priorities of North Carolina and Virginia.

BACKGROUND

The proposed SEHSR project is part of a plan by the US Department of Transportation (USDOT) and the states to develop a nationwide high speed rail network as one component of a nationwide intermodal transportation network. The purpose of the SEHSR project is to offer a competitive transportation mode that will divert travelers from air and auto travel within the SEHSR corridor. Authorization for a program of national high speed rail corridors was included in the Intermodal Surface Transportation Efficiency Act of 1991 and continued in the Transportation Equity Act for the 21st Century. In 1992, the USDOT designated the SEHSR Corridor as one of five original national high speed rail corridors. This designation allowed for federal funds to be spent on improvements to the existing rail system in order to achieve high speed rail service. The USDOT designated an extension of the SEHSR from Richmond to Hampton Roads in 1996. In 1998, the USDOT extended the corridor into South Carolina, Georgia, and Florida. Further extensions in 2000 added additional corridor connections in Georgia and Florida.

Since the initial corridor designation, the FRA and the FHWA have worked with North Carolina and Virginia to facilitate development of rail transportation options. In early 1998, FRA, FHWA, NCDOT Rail Division, and VDRPT entered into a joint Memorandum of Understanding to coordinate and document each agency's respective roles and responsibilities in developing environmental documentation for the proposed high speed rail programs in both states.

Based on the findings of earlier feasibility studies, NCDOT, VDRPT, FRA, and FHWA, focused on an incremental development approach to High Speed Rail (HSR) to formulate and analyze the SEHSR project in the Tier I EIS. This approach minimizes the impacts to both the human and natural environments by utilizing the existing rail infrastructure, an established

transportation corridor and railroad right-of-way. By maximizing use of existing infrastructure, the initial capital investment required by the system is also reduced.

Although rail infrastructure already exists in most locations, the incremental HSR approach would require improvements at various locations within the travel corridor. The improvements would accommodate higher passenger train speeds and increase the capacity of the infrastructure to handle additional passenger and freight rail traffic. Freight rail service efficiency must be maintained or enhanced as passenger service increases. Daily freight train traffic peaks at over 40 trains per day in the segments from Richmond, VA to Selma, NC and from Greensboro, NC to Charlotte, NC. There are no freight trains currently on the four segments where track has been removed and there are six segments with fewer than five freight trains per day. For the Raleigh to Greensboro to Charlotte corridor, currently proposed improvements include signalization, curve and interlocking improvements, and additional track.

Together, the NCDOT Rail Division and VDRPT coordinated and consulted with federal agencies, freight railroad companies, state resource and regulatory agencies, and the public to allow for early and on-going input on the proposed SEHSR project.

At the federal level, FRA and FHWA are the lead federal transportation agencies. Under an existing Memorandum of Agreement (MOA) in Virginia, the US Coast Guard, the US Army Corps of Engineers, and the US Fish & Wildlife Service are cooperating agencies. A Notice of Intent to prepare a Tier I EIS was published in the Federal Register on August 5, 1999.

The SEHSR team developed a scoping process to gather input from federal, state, and local agencies with areas of responsibility relevant to the project and from the public who are in some way affected by the project. The Tier I EIS scoping process was composed of the following:

- Informal communications with agencies about the project;
- Formal joint bi-state scoping meeting;
- Information briefings and small-group meetings;
- Written data and input requests;
- The formation of an advisory committee; and
- An extensive public involvement program.

In August 2001, the Tier I DEIS was distributed to state, federal, and local agencies in Virginia and North Carolina and was distributed to public viewing locations along all nine study area alternatives. The Executive Summary of the DEIS was available on the project web site, and CDs of the full document were made available upon request. This distribution was followed by a series of 18 public hearings with comments being received through December 2001. Public comments were recorded at workshops, through a hotline, with mail-in comment forms, and in interviews. Between 500 and 600 comments were received. Over 250 of these were substantive feedback, e.g. identification of community concerns. The remaining comments were requests for further project information or clarification. Typical issues included:

- Safety, noise, vibration, and impact on property values,
- Mix of commuter and freight rail and increased congestion,
- Access to high speed passenger rail service, and
- Impact on tourism and preservation of historic districts.

The public comments received from these hearings were reviewed and analyzed to determine the public's overall support of, or opposition to, SEHSR. Six hundred and fifty comments were supportive with eleven comments opposed.

Public and Agency comments were compiled and responded to in the Final EIS. To complete the Final EIS, all the study area alternatives and the no-build alternative were reviewed and compared to determine a preferred alternative (discussed in detail in the following section). In July 2002, the Tier I FEIS was distributed to state, federal, and local agencies in Virginia and North Carolina and was distributed to public viewing locations along all nine study area alternatives. A Notice of Availability for the Tier I FEIS was published in the Federal Register on July 26, 2002. The public comment period on the Tier I FEIS officially ended on August 29, 2002.

COMMENTS

Regulatory Agencies

The following agencies wrote in reference to the SEHSR Tier I FEIS:

- United States Environmental Protection Agency (EPA), Region 3;
- North Carolina Department of Environment and Natural Resources (NCDENR), Department of Water Quality;
- United States Army Corps of Engineers (COE), Norfolk District;
- Virginia Department of Environmental Quality (DEQ);
- North Carolina Wildlife Resources Commission (NCWRC), Habitat Conservation Program; and
- Federal Emergency Management Agency (FEMA).

These agencies concurred with the FEIS and the selection of the preferred alternative except the FEMA, which did not provide an opinion on the document. In the agency comments, the EPA stated that it does not expect the alternative, if implemented, will have a major impact to the natural environment. Noise, vibration and safety issues remain the highest concern for the EPA, however the EPA is satisfied that these will be addressed through public outreach and design level approaches. NCDENR noted that the project might require written concurrence of Section 401 Water Quality Certification and nationwide or regional permits. The COE suggested incorporating measures to avoid and minimize impacts to streams and wetlands, such as bridging, wherever practicable as the project moves forward. Relocation of streams should be avoided. The COE also recommended including conceptual options for compensating for unavoidable impacts to wetlands and other aquatic resources within the Tier II Draft EIS. The DEQ prefers maximizing the use of existing rail lines and corridors to the extent practicable and stated that the following environmental concerns will need to be addressed in detail in the Tier II environmental documentation: air quality (particularly in non-attainment or maintenance zones), historic and archaeological resources, water quality, natural heritage and wildlife resources, subaqueous vegetation beds, coastal zones, and regional plans. The DEQ also stated that specific Federal and State environmental laws and regulations will need to be adhered to concurrent with Agency coordination. NCWRC is pleased that the preferred alternative will be constructed within existing rail rights-of-way, which should limit impacts to streams, wetlands, and upland habitat. The agency is still concerned with wildlife habitat loss and degradation from construction of the proposed project and subsequent secondary development. The Tier II documents should include the linear feet of stream impacted and detailed design measures that will be employed to avoid and minimize impacts ton streams, wetlands, and sensitive species and habitats within the selected corridor. Also, a discussion of secondary impacts should be presented. NCDOT should also commit to using natural stream channel designs on all stream relocations and to use NCDOT Best Management practices.

FEMA noted the requirements of Executive Order 11988, which requires avoidance of adverse impacts to floodplains wherever there is a practicable alternative. FEMA further noted that to prove that the flood carrying capacity of impacted streams will be maintained, an engineering study and completion of the Conditional Letter of Map Revisions Application may be required.

Response: *Efforts will continue to be made during Tier II environmental documentation to avoid, minimize, or mitigate impacts to the human and natural environments as noted in the above agency comments. Additional engineering and other applicable studies will be implemented during the Tier II process to further define and quantify potential impacts to these resources. Continued coordination with resource agencies will be an integral part of that process.*

Business/Citizen

The following businesses wrote in reference to the SEHSR Tier I FEIS:

- CSX Transportation (CSXT);
- Keystone Association of Railroad Passengers;
- Sierra Club, Falls of the James Group; and
- Pegram Agency and the Embassy Cultural Center Foundation, Inc.

Sixty-five (65) citizens wrote to provide comments on the SEHSR Tier I FEIS.

CSXT generally supports Alternative A/B, but is concerned that the Tier I EIS does not elaborate on certain issues of importance to CSXT. These issues specifically include: ownership and control of railroads; the interaction of freight and high-speed passenger operations located on the same track; safety (mixed passenger-freight train operations on the same track, grade separations); liability on CSXT owned right-of-way; compensation for use of CSXT's right-of-way at fair market value; and no reduction in current or future capacity of the freight network. CSXT expressed similar concerns in their comments on the Tier I DEIS.

The Keystone Association of Railroad Passengers submitted a letter that supported the SEHSR corridor extending through Norlina, North Carolina rather than through Weldon, North Carolina. They noted that the path of the preferred alternative would support future operations at the 150 mph design speeds of the Acela locomotives. The letter also suggests integrating intercity bus service before train service is implemented. The bus service would connect trains to communities that will not be served by the train.

The Sierra Club, Falls of the James Group, wrote a comment letter which several issues and concerns. In this letter, the club stated that it is unacceptable that the SEHSR could not share its route with bike and pedestrian paths and trails since a local planned trail system in the area has been studied for over five years in Dinwiddie with Virginia Trails. Adequate review was requested regarding intermodal hubs and methods of transportation in the Petersburg area.

Response: *The Tier I SEHSR EIS is only the first phase of the proposed SEHSR project. This phase specifically focuses on a high-level planning and environmental review. The level of detail requested in the above comments is beyond the level of analysis for the Tier I SEHSR EIS. The level of analysis required to review these issues will be performed during Tier II SEHSR environmental studies, coordination, negotiations, and design. Please be assured that all these comments will be fully considered and addressed at the appropriate phase and prior to implementation of the proposed project.*

The Sierra Club letter stated that the public was not given adequate public hearing on the Final Tier I Environmental Impact of SEHSR. The Sierra Club letter also stated that the viewing location for the EIS in the Petersburg area was not a good choice and that the public was told that the environmental assessment had not yet been funded. The letter also stated that Alternative A/B was selected as the Tier I path before citizens were aware Alternative A/B was added.

The letter commented on potential impacts to Historic Resources. Specifically, the Sierra Club believes that Alternative A/B would dissect the historic civil war battlefields of Dinwiddie. The letter stated that there are farm properties with endangered fortifications under review by the Virginia Department of Historic Resources for potential listing under the National and State Historic Register. These properties are within the Alternative AB study area. Designations may be in place for Tier II studies.

Forty-seven form letters were received from private citizens that reflected the above comments from the Sierra Club letter.

Response: *Under the National Environmental Policy Act, a public hearing is not required for a Final EIS. The regulations require public notification and a 30-day review period of the document. The Notice of Availability was published in the key news publications in the study corridors and in the Federal Register on June 29, 2002. The locations for public review of the FEIS were chosen based on input from local agencies and the study advisory committee as well as prior locations where the DEIS was placed for public review and comments made during the DEIS public hearings (eighteen public hearings were held on the DEIS). In addition, electronic and paper copies of the FEIS were made available on request. Additional copies of the FEIS were also available to the public from the North Carolina Department of Transportation through letter, e-mail, fax, or phone requests.*

Tier II environmental studies have not been funded. Funding for Tier II studies cannot be committed for the proposed SEHSR unless and until a signed Record of Decision specifically recommends and adopts a SEHSR corridor.

No alternatives were added to the study process between the DEIS and the FEIS. Alternative A/B is a naming convention to represent the choice of both Alternatives A and B for further study (they are the same routing with the exception of a connection to Winston-Salem in Alternative B).

Tier II studies will fully review potential impacts to historic resources such as the civil war battlefields of Dinwiddie and will avoid, minimize, or mitigate any impacts as appropriate. Tier II environmental studies will provide more detailed and refined analysis of impacts to resources such as those outlined in the Sierra Club letter. Any coordination with the State Historic Preservation Officer and local groups will take place as necessary during the Tier II studies to include appropriate Memoranda of Understanding and Memoranda of Agreement.

The Sierra Club also questioned the level of analysis for potential river impacts provided in the DEIS. The group suggests that failing to consider potential impacts to smaller streams and creeks may eliminate potentially better, more environmentally friendly routes prior to more

detailed Tier II studies. Based on this opinion, the Sierra Club does not believe that the Tier I FEIS should be an accepted study but should wait for further review under Tier II.

Response: *The Tier I study process used a large overview of potential impacts in the project study areas to compare the different corridors. This overview allowed consideration of potential large-scale impacts to rivers and watersheds that would be more difficult to avoid or mitigate under the proposed action. Specific impacts to smaller streams and creeks are not identifiable in the scale of the Tier I study process since the exact position of the proposed rail-line in the corridor has not been determined. Regulatory agencies such as EPA, VA DEQ, NC DENR, the Coast Guard, and the COE have reviewed and concurred with the study process and resulting analysis. The Tier II process will define the specific alignment of the proposed SEHSR within the study corridor. The Tier II studies will review potential impacts to specific resources and will refine proposed rail alignments to reduce, eliminate, or mitigate impacts to these resources. Coordination with regulatory agencies will continue during Tier II studies.*

A private citizen stated that responses to comment numbers 110 and 111 were inadequate and failed to recognize the very large dollar costs and complicated operating aspects involved in trying to run any passenger services to and from Main Street Station (Richmond, Virginia), much less high speed rail service.

Response: *Responses to comment numbers 110 and 111 directly and specifically answered the questions posed. The comments did not request information about potential costs or complications associated with high-speed rail service at the Main Street Station. Information pertaining to costs and specific operating issues as discussed in this comment letter are beyond the scope of the Tier I study process. However, these issues will be addressed in Tier II studies as applicable. Currently, the City of Richmond is leading the effort to renovate the Main Street Station and re-introduce passenger service.*

Another private citizen commented that he supports Alternative (plan) B for high-speed passenger rail service. He feels this alternative needs more stations to properly serve such communities as Concord, Kannapolis, Kernersville, Hillsborough, and Wake Forest. This citizen also stated that the ranking system used to identify the preferred alternative is arbitrary and capricious as it lacks sensitivity based upon small variations and it does not include service to on-line stations in Alternative B. He believes a more sensitive ranking system would find Alternative B best. The project should not focus on minimizing end-to-end travel time since that market would continue to use air-travel.

Response: *Alternative B was chosen in combination with Alternative A as the preferred alternative providing all the benefits of both corridors. The identification of exact station and train stop locations is not within the scope of the Tier I process and, therefore, could not be used in the comparison of study alternatives. The ranking system focused on which corridors best met the project purpose and need while minimizing environmental impacts and presenting a viable business case. This approach was deemed appropriate by the regulatory and resource agencies with statutory authority over the planning process. Station locations and train stops will be determined in the Tier II environmental documentation.*

Other comments in that letter included:

- Dedicated feeder buses are needed to connect high-speed rail to locations outside the proposed corridor.

- The FEIS does not address Richmond to Washington service other than four round trips. Twelve round trips are needed, with two to Newport News, three to Florida and three terminating in Richmond in addition to the Carolina four.
- Success of Talgo trains in the Pacific-Northwest suggests their use between Raleigh and Charlotte.
- The S-line is the shorter and more reliable line of the available options.
- Congestion at Washington Union Station was not addressed in the Tier I document. A solution to avoid potential changes of locomotives or passenger train changes at Washington Union Station would be to extend the Northeast Corridor electrification to Richmond. Train changes could be accomplished at Staples Mill near Richmond, Virginia.
- Where will the funding come from?

Response: *The level of detail requested in the above comments is not within the scope of study of the Tier I SEHSR EIS. The required level of analysis will be performed during Tier II SEHSR environmental studies, coordination, negotiations, and design.*

More specifically, the proposed SEHSR project is being accomplished in incremental phases. Feeder bus service will be reviewed and analyzed during future phases of the project. Potential projects such as electrification to Richmond will be considered in future expansions and modifications to the rail system if implemented. Potential high-speed rail service to the Newport News/Hampton Roads area is the subject of a separate study being conducted by VDRPT and Virginia DOT. Other issues such as train types, track usage, and numbers of trips outside the SEHSR study corridor would be considered later in the study process as appropriate.

Although funding mechanisms won't be determined until later in the implementation process, potential sources include the High-Speed Rail Funding Bill currently being discussed in Congress and the upcoming Transit Funding Bill. Other innovative funding mechanisms will be identified and investigated as the proposed project approaches actual implementation.

Sixteen letters were received from private citizens who wrote to support the SEHSR. Two of those specifically supported the inclusion of Winston-Salem. One supported Alternative A and opposed Alternatives such as C. One of those citizens also requested consideration to allow small, crated cats and dogs to travel with passengers.

Response: *Policy decisions such as whether or not to allow crated pets on the SEHSR will be made by the operating organization or agency. At this time, the SEHSR operator has not been identified. Questions such as this will be recorded for further consideration once the operator has been identified.*

The Pegram Agency and the Embassy Cultural Center Foundation, Inc wrote to support the inclusion of Henderson, North Carolina in the SEHSR corridor.

Local Officials/Governments

The following local officials/governments wrote in reference to the SEHSR Tier I FEIS:
- Northern Virginia Regional Commission (NVRC);
- Mayor of the Town of La Crosse;
- Richmond Regional Planning District Commission;
- Mecklenburg-Union Metropolitan Planning Organization;

- Mayor of the City of Henderson;
- City of Henderson Planning Board;
- Henderson-Vance Downtown Development Commission;
- Henderson-Vance County Chamber of Commerce;
- Vance County Transportation Advisory Committee
- Kerr-Tar Regional Council of Governments;
- Kerr-Tar Rural Transportation Planning Organization;
- Cabarrus/South Rowan Urban Area Metropolitan Planning Organization (CSR MPO);
- Chesterfield County Board of Supervisors;
- Downtown Durham, Inc.;
- Greater Durham Chamber of Commerce;
- Rocky Mount Area Chamber of Commerce;
- Wilson Chamber of Commerce;
- Mayor of the City of Rocky Mount
- Mayor of the City of Wilson;
- Halifax County;
- City of Roanoke Rapids;
- Northampton County; and
- Halifax County Tourism Development Authority.

NVRC reviewed the FEIS and replied with no comment.

The Mayor of the Town of La Crosse supported a SEHSR stop in the town limits. He commented that a station stop in La Cross would be a great asset to that town as well as the area from the Town of South Hill to the Town of Lawrenceville.

The Richmond Regional Planning District Commission forwarded a letter from the United States Historical Society in full support of high-speed passenger rail service. The Mecklenburg-Union Metropolitan Planning Organization wrote to support the proposed SEHSR and the preferred alternative. The Mayor of the City of Henderson wrote to strongly endorse the preferred alternative and believes a stop in Henderson is important. The City of Henderson Planning Board, the Henderson-Vance Downtown Development Commission, the Henderson-Vance County Chamber of Commerce, the Vance County Transportation Advisory Committee, the Kerr-Tar Regional Council of Governments, and the Kerr-Tar Rural Transportation Planning Organization also expressed this opinion.

CSR MPO supports the preferred alternative. The CSR MPO does, however, encourage the use of wayside horns to mitigate noise impacts through their urban core and requests that any excessive noise be minimized. Specific noise studies and potential mitigation such as the one suggested will be fully analyzed and reviewed in the SEHSR Tier II environmental studies.

Response: *These issues will be fully considered and analyzed in the Tier II study and design process.*

The Chesterfield County Board of Supervisors submitted a resolution supporting implementation of the SEHSR through Chesterfield County. In summary, this support was dependent on five considerations:

- High-speed rail service is provided within the county;
- Construction of high speed rail through the county will accommodate future light rail service;

- Construction of high speed rail through the county will accommodate proposed Petersburg to South Hampton Roads rail service;
- S-line between Centralia and Petersburg will not be used due to potential impacts on adjoining neighborhoods, an existing park facility, and future highway construction; and
- Funds for high-speed rail are not diverted from highway improvements.

Downtown Durham, Inc. requested additional information as follows:
- The SEHSR could "divide" downtown Durham. What will be the impacts to future development projects in Durham?
- Has the estimate of how often the SEHSR train would stop in Durham (projected at 6 of the 8 roundtrips) changed?
- How fast will the SEHSR train be going when it passes through Durham?
- The Tier II environmental studies will need to fully evaluate roadway and pedestrian crossings. The Tier II study will also need to determine by which method the trains will pass through Durham (at grade, tunnel, ditch).

Greater Durham Chamber of Commerce questioned if Durham would be a stop for the SEHSR and would the Amtrak service continue to operate. The Chamber of Commerce was concerned about disruption that potential construction and noise impacts could have on central city businesses. They are also concerned with construction interference on arterial streets in Durham and resulting impacts on businesses. The chamber expressed their hope that the SEHSR will not disrupt proposed Triangle Transit Authority (TTA) system. The chamber feels that if the SEHSR will not stop in Durham, that the railroad should not pass though the city.

Response: *The purpose of the Tier I study was to identify the study corridor(s) to be carried forward for more detailed study during the Tier II process. The preferred SEHSR corridor does pass through Chesterfield County and through Durham; however, specific alignments and issues such as station locations, train stops, identification of specific rail right-of-way requirements, intermodal coordination (such as with TTA and Amtrak), frequency of rail trips, development impacts, and funding are not within the scope of the Tier I study process. These and associated issues will be addressed during the Tier II study process as appropriate.*

The Rocky Mount Area Chamber of Commerce stated that locating the proposed SEHSR in the Weldon, Rocky Mount, Wilson, Selma corridor would expand and enhance service options. Utilizing this corridor for the SEHSR could also conceivably ease existing north-south freight traffic congestion and could provide economic benefit to eastern North Carolina. The Wilson Chamber of Commerce and the mayors of the City of Rocky Mount and the City of Wilson also wrote to express these concerns and to support the SEHSR in eastern North Carolina, specifically on Alternatives G, H, or J.

The County of Halifax wrote to support any of the alternatives that would travel through the County. The City of Roanoke Rapids, Northampton County, and the Halifax County Tourism Development Authority also wrote to support any of the alternatives that would travel through the Roanoke Rapids/Weldon area and eastern North Carolina.

Response: *Although the Tier I process identified Alternatives A and B as the preferred corridor, connections to the high speed corridor will be accessible to eastern North Carolina in Petersburg and Raleigh via the existing Amtrak passenger service in the Rocky Mount, Wilson, Smithfield, and Selma areas. Service through these areas is anticipated to continue and will*

benefit from equipment improvements and congestion mitigation efforts being undertaken by both states.

DECISION

The FRA and the FHWA working closely with NCDOT and VDRPT have selected the following build alternative for the SEHSR project for further Tier II environmental studies:

The preferred alternative consists of Alternative A (utilizing the S-line and the NCRR rights-of-ways) modified to include passenger connectivity to Winston-Salem, NC (Alternative B via the Winston Salem South Bound –WSSB and the K-line railroad rights-of-ways). The combination of Alternatives A and B best meets the project's purpose and need, while minimizing environmental impacts and has the highest level of public and agency support. VDRPT and NCDOT recommend that the Alternative A portion be developed first and that the Alternative B portion be developed in conjunction with the efforts of the Piedmont Authority for Regional Transportation (PART), as appropriate. PART is responsible for coordinating the regional transportation system in the counties around the Winston-Salem connection. The combination of Alternative A and Alternative B has:

- Minimized potential impacts to wetlands and threatened and endangered species;
- Moderate levels of potential environmental complexity;
- Strongest agency support;
- Highest level of service;
- Highest projected annual ridership;
- Largest combined trip diversions from auto and air to rail, with competitive total travel time;
- Second best net reduction in NO_x emissions and overall net energy use reduction;
- Best potential operating cost recovery; and
- Highest level of public support.

Figure 1
Preferred Alternative
Alt. A + Alt. B

As identified in the FEIS, the preferred alternative is also the environmentally preferred alternative.

COMPARATIVE ANALYSIS OF THE STUDY AREA ALTERNATIVES

The SEHSR Tier I EIS considered nine alternatives in addition to the no-build option (Figure 1). Each study area alternative was a six-mile wide corridor, centered on existing rail rights-of-way, between Washington, DC and Charlotte, NC. (passing through Richmond, VA. and Raleigh, NC.). Each study area alternative was made up of different combinations of twenty-one different railroad line segments, active and abandoned, and new track. Proposed improvements for these alternatives generally include track upgrades, double tracking, additional sidings, curve straightening, signal improvements, and grade crossing safety. Table 1 provides a concise summary of the operational and physical characteristics of the nine study area alternatives.

A comparative evaluation of the study area alternatives was conducted to identify the preferred alternative based on potential environmental impacts as well as the physical and operational characteristics of each alternative. This evaluation specifically considered public and agency comments on the proposed SEHSR and evaluative criteria based on the purpose and need.

The comparative evaluation began by reviewing public and agency comments for the proposed SEHSR. Public comments were reviewed and analyzed to determine the public's overall support of or opposition to SEHSR. Six hundred and fifty comments were supportive with only eleven comments opposed. Thirty-nine of those comments expressed a preference for or against a specific study area alternative, with support for Alternative A receiving most of those comments. Over all, sixty-nine percent of the comments received indicated a desire for passenger service to the Winston–Salem area, which is satisfied through Alternatives B, E, and H. The primary difference between Alternative A and B is the connecting service to the Winston-Salem area. Alternatives A and B received the most support from those regulatory/resource agencies that expressed support for specific alternatives.

Ten criteria were used to assess how well each study area alternative fit the Purpose and Need. Each alternative was ranked based on these criteria, which included:

- Annual Ridership
- Annual Diversions in 2025
- Net energy reduction (fuel gal/yr.)
- Number of at grade crossings
- Air Quality – Reduction in NOx
- Average Total Travel Time
- Net Operating Contribution
- Capital Cost Efficiency Factor
- Environmental Complexity Index
- Engineering and Operations Complexity Index

Of these criteria, six refer to operating/engineering characteristics, three refer to a composite index or individual environmental factors and one refers to public safety. The emphasis on the operating characteristics is due to the requirement that the preferred alternative be a viable business alternative with a minimum of environmental impacts. The results of this evaluation are shown in the Figure 2.

Alternative A ranks highest because it is the best of all nine alternatives for five of the 10 assessment criteria, namely annual ridership, annual air to rail diversions in 2025, net operating contribution, capital cost efficiency, and areas of engineering complexity. Alternative A is second best for four of the 10 criteria, namely annual auto to rail diversions in 2025, net energy reduction, net reduction in NO_x emissions, and average total travel time for the route. From a permitting standpoint, Alternative A is among the lowest for potential wetland impacts and has the lowest potential impacts to threatened & endangered species. Alternative G ranks best in three of the ten criteria, namely annual auto to rail diversions in 2025, net reduction in NO_x emissions, and net energy reduction.

The SEHSR project's "business case" requires the preferred alternative to be economically viable. In order to determine relative economic viability (between the different study areas), the study area comparative evaluation examined the study area alternatives based on the potential net operating contribution and the conceptual capital cost. Figure 3 shows the comparison of study area alternatives based on these two elements.

Figure 2
SEHSR Study Area Alternatives

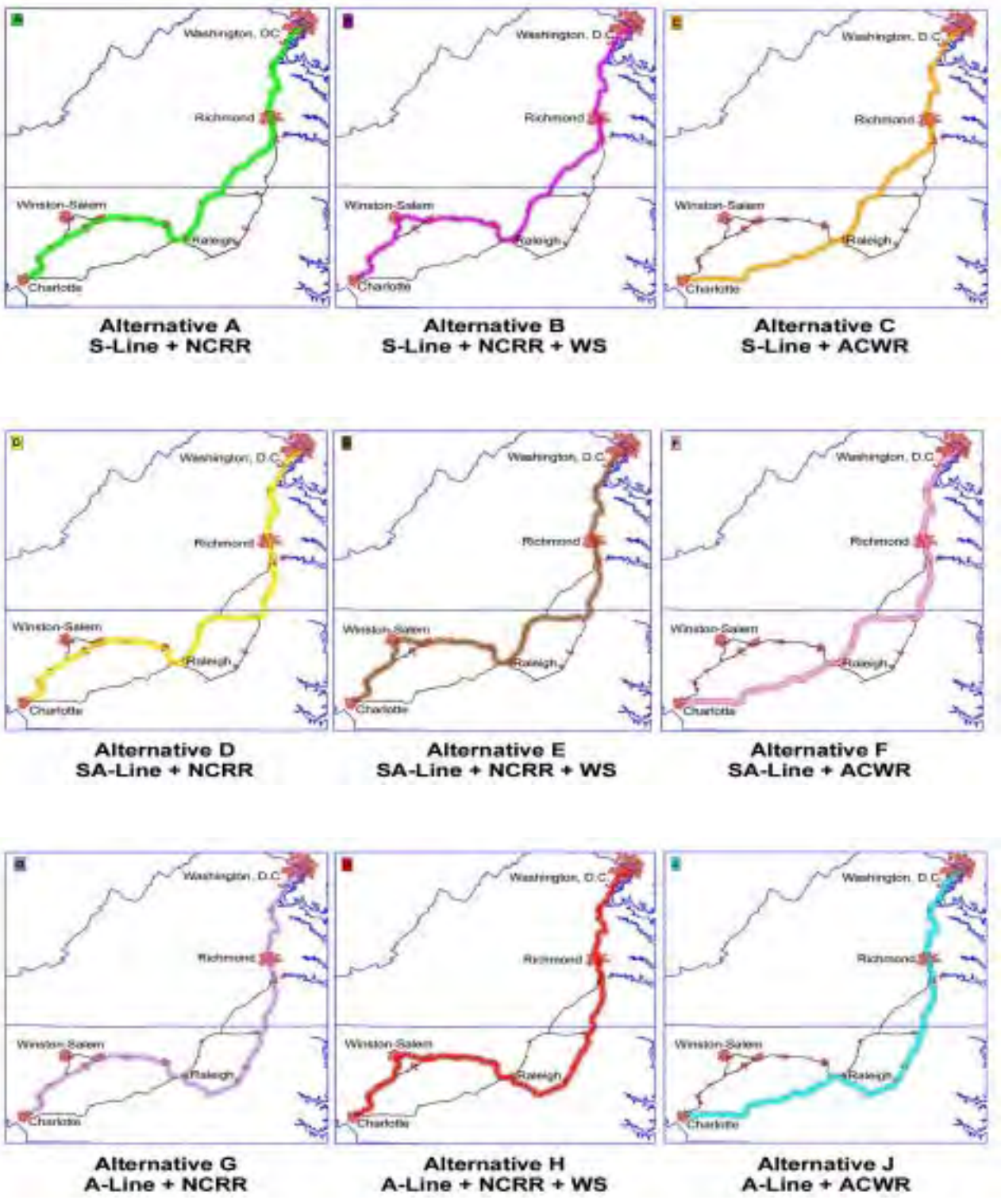
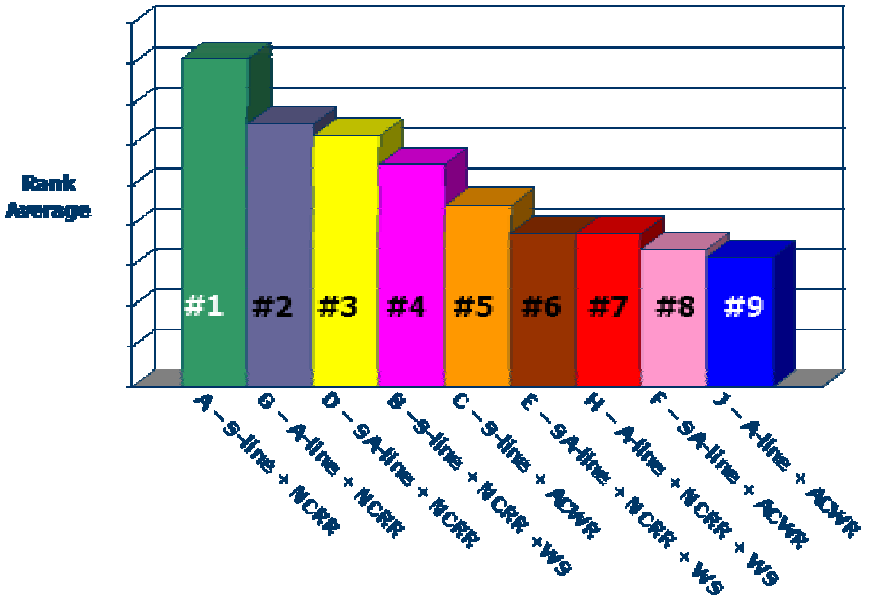
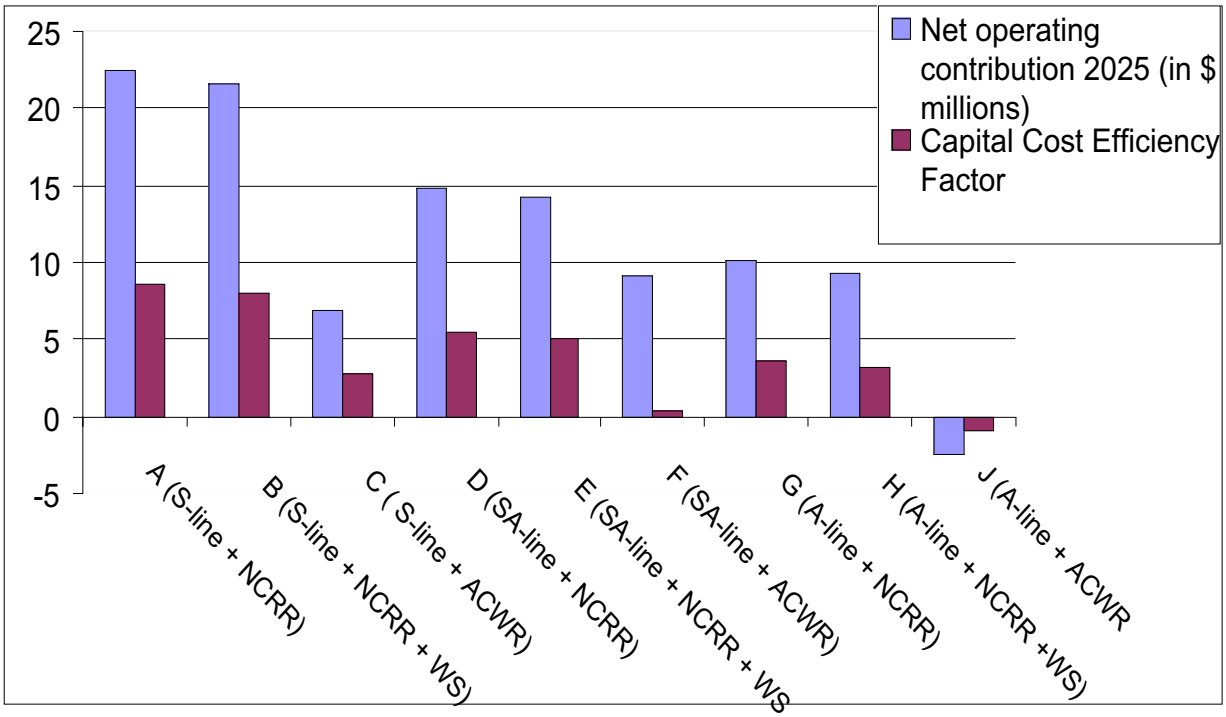


Figure 3
Relative Ranking of Study Area Alternatives



At this point, Alternatives A, B, D, and G are the most viable candidates for the preferred alternative based on their highest relative ranking using the purpose and need factors (Figure 3). Of those four alternatives, Alternative A and Alternative B show the strongest potential for economic vitality (see Figure 4).

Figure 4
Analysis of Study Area Alternatives Based on SEHSR Economic Viability Factors



The comparative evaluation of the study area alternatives further reviewed which alternative would have the least potential environmental and social impacts. Table 2 provides a summary of the potential impacts of the proposed SEHSR for each study area alternative by impact area. Alternative A and Alternative B were found to minimize potential wetland impacts. Alternative A offers a moderate level of environmental complexity. It ranks second highest in net energy reduction and net reduction in NO_x primarily because it offers service along the most populated areas of the NCRR and it offers the greatest combined passenger diversion from auto and air to rail. Alternative B is similar to Alternative A but has some increased environmental complexity due to grade issues in the Winston Salem area. Alternative D has the lowest level of environmental complexity but also has the greatest potential impact for prime farmland, protected species, and estimated residential relocations. Alternative G has a moderate level of environmental complexity but has potentially greater impacts to wetlands, which are more prevalent in eastern North Carolina. Given the complexity of avoiding and/or mitigating for significant wetland acreage, substantial protected species, and prime farmland impacts, Alternatives A and B are the environmentally preferred among those candidates satisfying the purpose and need criteria and economic viability requirements.

The no build scenario was also evaluated and compared to the study area alternatives. Under the no build scenario, similar kinds of impacts as discussed for the build alternatives could be expected due to improvements required for anticipated expansion of the existing freight and conventional passenger rail system. It is anticipated that these improvements will result in fewer delays and congestion for freight services. CSXT, Norfolk Southern (NS) and its subsidiaries, and the Aberdeen, Carolina & Western (ACWR) provide freight rail service in the nine Study Area Alternatives. CSXT increased the number of carloads originated system-wide in 2000 by 5.1% over 1999 carloads. During the same period, NS increased the number of carloads originated system-wide by 19.0%. Both CSXT and NS have identified the I-95 corridor as one of the growth corridors for freight services. Currently proposed improvements include improvements to infrastructure (signalization, passenger station improvements, improvements to track capacity, and highway-rail crossing improvements) and to the fleet of locomotives and cars, which would allow for higher average speeds, provide better acceleration, and mitigate the need to slow for curves.

Proposed regional rail and expanding commuter rail passenger services in the study areas would further increase the daily train traffic and contribute to congestion.

The planned improvements to the existing rail line will improve capacity, reliability and travel times along some segments of the Washington, DC to Charlotte corridor. However, without the full implementation of improvements associated with the SEHSR program, freight and passenger services along the study areas from Washington, DC to Charlotte, NC are projected to experience greater delays and congestion over time.

The no build alternative also includes existing and planned improvements to the highway and air travel networks. Committed improvements to the highway networks focus primarily on the I-85/I-95 corridor. Other interstate improvements are planned for the I-40 corridor between Winston-Salem and Raleigh, North Carolina. Of the six major airports within the study areas, five have either recently implemented airport expansion plans or are currently expanding their facilities to meet increasing air travel demands. Projections show that by 2003, the major east coast airports linking the northeast and southeast are estimated to generate 20,000 annual hours of flight delays. For many of these airports, the FAA has determined that recommended improvements alone would not adequately meet the projected growth in demand. While the anticipated no-build impacts are potentially spread out over a longer period of time (due to

slower expansion of the systems), they could be accompanied by other impacts due to additional auto or air capacity needed to handle the trips which would not be diverted under the no build alternative. The no build alternative lacks the positive benefits of improved air quality and net energy reduction per passenger mile traveled in the corridor. It also fails to meet the other key purpose and need factors of offering additional transportation choices, easing of congestion, while improving overall transportation system safety and effectiveness minimizing environmental impacts. Thus the no build alternative is not considered appropriate in light of the project purpose and need.

From this evaluation, the study area alternative that best meets the purpose and need, meets the business model requirements, and minimizes environmental impacts is a combination of Alternatives A and B.

SECTION 4(f) AND 6 (f) APPROVALS

The program level Tier I EIS did not complete the documentation requirements of Sections 4(f) and 6(f) which are federally enacted laws that specify requirements for documentation and analysis regarding potential impacts from a proposed action involving federal funds to parks, recreational areas, cultural resources or publicly owned lands. The formal 4(f) process and any needed 4(f) or 6(f) documentation, coordination and agency consultation will be undertaken, as appropriate, during the Tier II analysis when specific boundaries and uses are determined. However, a general assessment of potentially impacted sites (within 1500 ft of the preferred alternative) was conducted. The preferred alternative could potentially impact 14 to 15 parks, 5.7 acres of gamelands/public lands and up to 435 national register and Study List sites. Design refinement during Tier II may substantially minimize or avoid these potential impacts. When comparing the study area alternatives that best fit the Purpose and Need (Alternatives A, B, D, and G), Alternatives A and B have the least amount of potential impacts to 4(f) or 6(f) sites.

FUTURE ACTIONS TO REDUCE POTENTIAL FOR ENVIRONMENTAL IMPACTS

The incremental HSR approach reduces the potential for environmental impacts by maximizing the use of the existing infrastructure and right of way.

By using a tiered document, the overall program concept is examined, allowing opportunity to best minimize potential environmental impacts while still meeting the project purpose and need. All practicable means appropriate for a Tier I level document have been adopted to avoid or minimize environmental harm. During the Tier II process, planning will be done to avoid and minimize impacts to both the human and natural environment by accurately identifying resources at the detail level and subsequently examining different design options. Consideration will be given to potential construction and operational impacts.

The actions for implementing the proposed HSR service in the SEHSR corridor would each receive the appropriate level of environmental documentation during the Tier II process.

Detailed noise and vibration studies would be done as appropriate to identify mitigation needs. Potential mitigation techniques range from noise walls and ballast pads, to quiet zones and modification in the design of actual train sets.

Potential relocations will be minimized by staying within existing right-of-way to the maximum extent possible. All persons whose property is acquired or who are displaced as a result of a

Federal or Federally-assisted project are ensured of fair, consistent and equitable treatment through the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public law 91-646) and the Uniform Relocations Act Amendments of 1987 (Public law 100-17). The Uniform Act contains specific requirements that govern the manner in which a government entity acquires property for public use. The law is designed to ensure just compensation for all acquired properties and minimal impact on the current owners and lessees. The need for land acquisition and the number and types of properties that might be acquired will be more thoroughly defined during the Tier II environmental process. In addition, information would need to be gathered about the properties and occupants and relocation benefits and sites would be specified.

Care would be taken to span waterways where practicable, and to avoid paralleling flood plains and waterways, as well as avoiding wetlands to the maximum extent practicable. Best Management Practices will be followed in the planning, design, and construction stages. Formal coordination with the appropriate resource agencies would also be undertaken.

Detailed field studies, coupled with completion of Endangered Species Act, Section 7 consultations, along with completion of the Section 106 process of the National Historic Preservation Act, will help insure the avoidance and reduction of potential impacts to natural and cultural resources. Formal coordination with the appropriate resource agencies would also be undertaken.

Every effort would be made to continue the communication process with the regulatory and resource agencies and the local communities along the selected corridor that was initiated during this first tier phase. Their continued input will be critical in reducing potential impacts to both the human and natural environments to the maximum extent practicable.

During the detailed Tier II studies, mitigation plans would be developed as appropriate for unavoidable impacts in concert with the regulatory and resource agencies and local communities. Monitoring and enforcement programs would be established for each mitigation plan as appropriate.

10/2/02
Date of Approval

Donald J. Voelker
Federal Highway Administration
for Nicholas L. Graf

10/18/02
Date of Approval

Federal Railroad Administration

Table 1
Study Area Alternatives: Operational and Physical Characteristics

Study Area	A	B	C	D	E	F	G	H	J
Length	448 miles	463 miles	428 miles	468 miles	483 miles	448 miles	481 miles	496 miles	461 miles
Existing Railroad ROW	677.8 acres	731.31 acres	929.95 acres	620.13 acres	673.59 acres	872.23 acres	544.99 acres	598.0 acres	579.0 acres
Average Total Travel Time (Washington, DC to Charlotte)	6.23 hours	6.90 hours	6.20 hours	6.55 hours	7.23 hours	6.53 hours	6.75 hours	7.43 hours	6.73 hours
Average Travel Speed	72.6 mph	68.7 mph	70.0 mph	73.1 mph	69.3 mph	70.5 mph	72.1 mph	68.5 mph	69.6 mph
Net Energy Reduction Fuel (gal/yr)	10,015,119	9,724,939	6,679,376	9,924,448	9,557,693	6,564,192	10,433,752	9,993,470	6,910,545
Conceptual Capital Cost (Year 2000 $s)	$2.611 billion	$2.720 billion	$2.515 billion	$2.711 billion	$2.820 billion	$2.6215billion	$2.848 billion	$2.957 billion	$2.752 billion
Year 2025 Annual Ridership	1,644,900	1,612,000	1,239,400	1,556,000	1,517,700	1,174,900	1,523,500	1,480,700	1,152,900
Year 2025 Ticket Revenue/Plus Food/Bev.	$103.33 million	$105.39 million	$81.66 million	$95.21 million	$97.72 million	$75.72 million	$90.37 million	$92.66 million	$72.35 million
Year 2025 Operating Expenses	$80.83 million	$83.75 million	$74.75 million	$80.42 million	$83.48 million	$74.81 million	$80.22 million	$83.32 million	$74.79 million
Net Operating Contribution (loss)	$22.497 million	$21.649 million	$6.914 million	$14.789 million	$14.237 million	$.908 million	$10.150 million	$9.341 million	$(2.44) million

Source: Carter & Burgess November 2000: KPMG Model Forecast Data, October 2000.
**Note:* Additional revenues are expected from mail, express and baggage. These numbers are for the 8-modeled SEHSR trains.

Table 2
Summary of Potential Impacts and Benefits of the Study Area Alternatives

Impact Areas	Study Area Alternatives								
	Alternative A	**Alternative B**	**Alternative C**	**Alternative D**	**Alternative E**	**Alternative F**	**Alternative G**	**Alternative H**	**Alternative J**
4.1.1 Water Resources									
# Of Water Supply Watersheds (6 mile wide buffer)	27	33	19	28	35	21	27	34	21
# Of Potential Crossings of Major Rivers	29	28	9	31	30	33	29	28	31
4.1.2 Wetlands Potential Impacts in acres (Within 300 ft buffer)	117.3	115.8	117.0	124.0	122.5	123.7	190.7	189.2	190.4
4.1.3 Floodplains and Floodways # Of crossings of 100-year Floodplain	83	76	44	89	82	50	97	90	58
Mineral Resources # Of Historic Mines within 0.5 miles Of existing rail lines	36	37	40	37	38	41	33	34	37
4.1.1.7 Hazardous Materials Sites # Of sites within 0.5 mile buffer	412	441	252	427	456	267	454	483	294
4.1.1.8 Air Quality Net reduction in NOx emissions From auto diversion to trains (In lbs/yr) *	554,889	530,895	279, 065	547,392	517,065	269,540	589,505	553,099	298,179
4.1.1.9 Noise and Vibration # Of Category 3 noise and vibration sensitive receptors (Within 150' of existing lines)	333	342	259	371	371	287	369	372	284
4.1.1.10 Energy Fuel consumption per trip (in gallons)	403	432.3	383.5	421.2	450.5	401.7	434.2	463.5	414.7
4.1.1.11 Prime Farmland Prime farmland in acres	37,219	39,360	26,523	45,137	46,992	34,308	57,346	59,134	46,670
4.2. 1 Protected Species # Of known populations identified	33	35	45	44	46	56	43	49	51

Impact Areas	Study Area Alternatives								
	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	Alternative H	Alternative J
4.2.2 National Rivers Inventory	11	11	13	10	11	13	12	13	14
4.3.1.1Community Impacts Sites with potential impacts in areas of Environmental concern	5	6	5	4	5	4	4	4	4
4.3.1.2Environmental Justice Populations % Minority population (1999) % Low Income Households (1999) (300 ft buffer)	 39% 47%	 39% 48%	 37% 43%	 43% 48%	 43% 48%	 43% 46%	 41% 47%	 41% 47%	 40% 44%
4.3.1.5 Acquisition/Relocation Acres to be acquired # Residential relocations (each) Business relocations (sq ft)	 678 365 65,145	 731 371 110,920	 930 220 57,374	 620 405 62,191	 674 411 107,966	 872 260 54,420	 545 301 70,344	 598 307 116,119	 797 156 62,573
4.3.1.6 Transportation Impacts** At grade crossings	548	613	544	601	666	597	600	665	596
4.3.1.8 Historic Sites National Register Sites Study List Sites (1500ft buffer)	 333 102	 333 102	 304 58	 333 165	 333 165	 304 121	 320 168	 320 168	 211 124
Section 4(f) and Section 6 (f) properties **Parks** Game lands/Public lands (acres) (See 4.3.1.8 above for historic sites)	 14 5.7	 15 5.7	 11 14	 14 5.7	 15 15.7	 11 15.3	 15 5.7	 16 5.7	 12 15.3

* Emission factors from standard EPA emissions models. Assume average car in 1997 operating on a typical summer day (72 to 96 degrees F)
**Includes public and private crossings