2.0 ERRATA

This chapter contains clarifications and corrections in accordance with 40 Code of Federal Regulations (CFR) 1503.4(c). Neither the clarifications nor the corrections alter the conclusions presented in the Tier I DEIS regarding environmental impacts. The corrections and clarifications form the substance of Chapter 2 of this Tier I FEIS. Errata rectify minor errors found in the Tier I DEIS ranging from corrections of spellings to inserting words or phrases inadvertently omitted from the Tier I DEIS to changes resulting from the response to Tier I DEIS comments. Clarifications consist of explanatory information designed to enhance understanding of information in the Tier I DEIS. These clarifications do not represent substantive changes to the analysis or findings in the Tier I Draft EIS.

2.1 Organization of Clarifications and Corrections

To assist the reader, organization of this chapter follows the organization of the Tier I DEIS. The corrections and clarification first address the Executive Summary of the Tier I DEIS and then progress through the remainder of the chapters and appendices that were included in that document. Those sections of the Tier I DEIS not requiring any changes or clarifications have not been included in the list of errata.

2.2 Finding Clarifications and Corrections

Each correction or clarification is listed according to its page, paragraph, and sentence in the Tier I DEIS. If you did not receive a copy of the Tier I Draft EIS dated August 2001, please locate it on the CD that can be found in the pocket of the last page of this Tier I FEIS, or contact David Foster of the NCDOT Rail Division at (919) 508-1917.

In order to follow the errata changes made to the Tier I DEIS, some sections, paragraphs, or tables have been reprinted in their entirety. However, most of changes are simply a replacement of a word or phrase.

Page Number	Location	Errata
Cover Sheet	Line 4	Replace: "June" with "August"
Abstract	The paragraph starting with, "The proposed project is"	Sentence four. Replace: "will" with "would"
Abstract	The paragraph starting with, "The proposed project is	Sentence eight. Replace: Entire sentence with "Projected total ridership for the proposed SEHSR in 2025 is between 1.3 million and 1.8 million passengers annually, depending on the route."
ES-2	The bullet starting with, "At-grade highway"	Sentence two. Replace: "pubic" with "public"
ES-3	Exhibit ES-1	Replace: "Pittsburg" with "Pittsburgh"
ES-5	Exhibit ES-3; Segment Description – SEHSR	Bullet 1. Replace Bullet with: "Former RF&P Line and S-Line – Washington, DC to Centralia, VA and Former C&O Line – Richmond, VA to Doswell, VA (common to all 9 alternatives)"
ES-6	Exhibit ES-4	Replace: "AlternativeD" with "Alternative D"
ES-8	Table ES-1	Replace: Entire table with new Table ES-1 located at the end of this chapter. Table has been re-formatted for text consistency.
ES-9	Table ES-2	Row six. Remove: Entire row titled "Net Operating Income or (loss) in year 2025." This row is a duplicate of row five. Insert footnote: "Includes all twelve trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
ES-10	Table ES-3	Replace: Entire table with new Table ES-3 located at the end of this chapter. The correct units (acres) to the "Wetlands (NWI & hydric soils)" section of Table ES-3 have been added; the numbers of Historic Sites/National Register Sites/Study List Sites have been corrected and
		revised; and the Hazardous Material study site buffer has narrowed from six miles to 0.5 miles.
1-1	The paragraph starting with, "The proposed SEHSR"	Sentence 2, parenthetical clause. Insert: New footnote, "with the exception of the Richmond to Doswell portion which is a wider study area."
1-4	The bullet starting with, "Environmental Impact Statements"	Replace: "known that the action will have significant" with "reasonably anticipated that the proposed action or alternatives could have substantial"
1-6	Figure 1.2	Replace: "Pittsburg" with "Pittsburgh"
1-9	The paragraph starting with, "Since 1960, the population"	Last Sentence. Delete: "the FEIS and"
1-12	Table 1-1	Insert footnote: "Includes all twelve trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."

Page Number	Location	Errata
2-5	The paragraph starting with, "Another approach to"	<u>Last Sentence. Insert:</u> footnote "EPA Tier 2 compliance for locomotive emission limits as specified in 40 CFR Parts 85, 89, and 92."
2-5	The paragraph starting with, "Many non-U.S. trains"	First Sentence. Replace: "it" with "them"
2-6	The paragraph starting with, "Provision of dual power"	Third Sentence. Replace: "No are no" with "There are no"
2-8	Bullet 1.	Insert: "(study area includes the former C&O line from Richmond, VA to Doswell, VA)" after "between Washington, DC & Richmond;"
2-10	Bullet 1.	Replace bullet with: "Former RF&P and S-line – Washington, DC to Centralia, VA and Former C&O Line – Richmond, VA to Doswell, VA (common to all 9 alternatives)"
2-10	The paragraph starting with, "This segment encompasses"	Insert a new second sentence after the first sentence: "The study area in this section widens to include the C&O Line from Richmond to Doswell".
2-11	Figure 2.2; Segment Description – SEHSR	Bullet 1. Replace Bullet with: "Former RF&P and S-line – Washington, DC to Centralia, VA and Former C&O Line – Richmond, VA to Doswell, VA (common to all 9
0.10		alternatives)"
2-18	All Bullets All Bullets	Insert: "Former C&O line," after "Former RF&P, "
2-19 2-20	The paragraph starting with, "This Study Area Alternative"	Insert: "Former C&O line, " after "Former RF&P, " First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."
2-20	Table 2.1	Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-21	The paragraph starting with, "This Study Area contains"	First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."
2-21	Table 2.2	Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-22	The paragraph starting with, "This Study Area contains…"	First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."

Page Number	Location	Errata
2-22	Table 2.3	Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC
		to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-22	Table 2.3	Replace: "\$73.89 million/\$52.71 per passenger" to "\$89.91 million/\$62.75 per passenger".
2-23	The paragraph starting with, "This study area contains"	First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies
2-23	Table 2.4	between Richmond, VA and Doswell, VA." Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-24	The paragraph starting with, "This Study Area includes"	First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."
2-24	Table 2.5	Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-25	The paragraph starting with, with "This Study Area includes"	First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."
2-25	Table 2.6	Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-26	The paragraph starting with, with "This study area contains"	First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."
2-26	Table 2.7	Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-27	The paragraph starting with, with "This study area contains"	First Sentence. Insert: "former C&O line, " after "Former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."
2-27	Table 2.8	Replace: "Existing Railroad right-of-way" with "Potential

Page Number	Location	Errata
		right-of-way needs". Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-28	The paragraph starting with, with "This study area contains"	First Sentence. Insert: "former C&O line, " after "former RF&P, " Insert new Third Sentence: "The former C&O line lies between Richmond, VA and Doswell, VA."
2-28	Table 2.9	Replace: "Existing Railroad right-of-way" with "Potential right-of-way needs". Replace: "579.0" with "797" Add footnote: "Includes all 12 trains in the Washington, DC to Charlotte, NC corridor (eight SEHSR trains plus existing Amtrak Crescent and three silver service trains)."
2-30	Table 2.10	Line 3, Column 3. Replace entire description: "A newly constructed flyover bridge exists at the junction of I-295 and I-64."
2-32	Table 2.11	Line 2, Column 3. Replace the first sentence: "An expansion of the airport was recently completed and an underground connection to the main terminal and permanent mid-field terminals is under construction."
2-43	The paragraph starting with, "The environmental document focuses"	Replace the fourth sentence: "Due to the large size of the study areas, the general nature of the existing environment, potential benefits and impacts, and conceptual capital costs for study area improvements, will also be reviewed at a larger scale."
2-44	Table 2.16; Row starting with "Rail Lines"	Column A. Delete: "A-line" Column B. Delete: "A-line" Column C. Delete: "A-line"
2-45	Table 2.17	Replace: Entire table with new Table 2.17 located at the end of this chapter. Ridership and revenue figures have been corrected to show only numbers attributable to the modeled eight SEHSR trains. Note. Delete: "food and beverage"
3-25	Table 3.7	Replace: Entire table with new Table 3.7 located at the end of this chapter. The Hazardous Material study site buffer has narrowed from 6 miles to 0.5 miles, resulting in a change to the number of impacted sites.
3-30	Figure 3.1	Replace: Figure 3.1 with new Figure 3.1 at the end of this chapter.
3-31	Figure 3.1B	Replace: Figure 3.1B with new Figure 3.1B at the end of this chapter.
3-41	Figure 3.2	Replace: Figure 3.2 with new Figure 3.2 at the end of this chapter.
3-52	The paragraph starting with, "There are 46 counties"	Change sentence one: "There are 46 counties" to "There are 46 counties and/or independent cities"
3-52	The paragraph starting	Change sentence five: "and Warren (46%) Counties" to

Page Number	Location	Errata
	with, "The population in"	"and Warren (46 percent) Counties"
3-56	Figure 3.3	Replace: Figure 3.3 with new Figure 3.3 at the end of this chapter.
3-57	Footnote 1	Revise first sentence to read: "Data sources for this analysis are the 1990 Census Summary Tape File 3 and 1999 population estimates and 2004 projections calculated from the 1990 data sets using forecasting factors developed by CACI Marketing. CACI Marketing is a nationally based firm that specializes in population projections."
3-58	The paragraph starting with, "Table 3.17 provides"	Change sentence one: "Study Area Alternatives by County" to "Study Area Alternatives by county and/or independent city"
4-9	The paragraph starting with, "The actual wetland impacts"	First Sentence. Revise to read: If the ROD for the Tier I process states that a build alternative will be carried forward for further analysis, more refined estimates of wetland impacts will be identified in the Tier II studies. Total final wetland impacts identified in the Tier II process would be substantially less than the estimates shown because of the use of existing trackbed in many areas and a smaller proposed construction footprint (200 feet versus the 600 feet buffer). Study Area Alternative B has the smallest area of identified wetlands within 300 feet of the existing rail lines at 115.8 acres."
4-19	Prior to table 4.1	Add the following paragraph: "Emergency response procedures for handling dangerous goods/hazardous materials incidents are outlined in the 2000 Emergency Response Guidebook developed jointly by Transport Canada (TC), the U.S. Department of Transportation (DOT), and the Secretariat of Transport and Communications of Mexico (SCT) for use by fire-fighters, police, and other emergency services personnel who may be the first to arrive at the scene of a transportation incident involving dangerous goods. The guidebook includes an indexed list of dangerous goods; provides safety recommendations including the potential hazards the material may display; suggested public safety measures based on the situation at hand; contains a table that lists, by ID number, TIH materials; and emergency response actions, including first aid (ERG, 2000). Procedures set forth in the guidebook will be followed in the operation of the proposed service. TIH materials are defined as liquid or gas which is known to be so toxic to humans as to pose a hazard to health during transportation, or in the absence of adequate data on human toxicity, is presumed to be toxic to humans, because when tested on laboratory animals it has an

Page Number	Location	Errata
		LC50 value of not more than 5000 ppm. The release of hazardous materials into receiving waters could occur due to refueling, collisions, derailments, or minor leaks from trains. Mitigation for these occurrences would be incident specific. Appropriate agencies would be contacted at the time of an incident.
4-20	Table 4.11	Insert at beginning of the table: New section of Table 4.11, located at the end of this chapter. The new section contains data for Virgina that was inadvertently left out of the Tier I DEIS.
4-54	The paragraph starting with, "In general, no…"	Sentence two. Replace: "Table 4.24 provides" with "Table 4.21 provides"
4-55	The paragraph starting with, "Sound and Noise"	Sentence three. Replace: "due to this increased traffic" to "due to this increased traffic, assuming no mitigation or enhancements to abate noise and vibration effects"
4-62	The paragraph starting with, "The effects of"	Revise paragraph to read: "The effects of the No Build Alternative will be due to projected ridership growth along the Washington, DC to Charlotte, NC corridor from its current level of 418,000 to 498,000 by 2015 and 543,000 by 2025, as described in Section 2.5. Similarly, travel delays within the corridor are due to the increasing volumes of both passenger and freight service, and the need to efficiently manage peak passenger and freight rail traffic will become even more critical over the next 15 years. Subsequent noise and vibration effects will also result from this increased traffic, assuming no mitigation or enhancements to abate noise and vibration effects."
4-62	The paragraph starting with, "Based on a review…"	Last sentence. Replace "the final Tier I Environmental Impact Statement." with "Tier II studies."
4-63	Table 4.24	Replace: Entire table with new Table 4.24 located at the end of this chapter. An incorrect method was previously used for including the northern segment with all other segments. Because the error had a proportional effect on all alternatives, the numbers in the new table do not alter any conclusions or findings presented in the Tier I DEIS.
4-64	The paragraph starting with, "Study Area Alternative C"	Sentence one. Replace: "minority community members;" with "minority community members;"
4-64	The paragraph starting with, "A conclusion from"	Sentence four. Replace: "exceeds the general population average by 50%" with "exceeds the general population average by 50 percent"
4-65	The paragraph starting with, "Table 4.25 provides"	Sentence three. Replace: "illustrated in Figure 4.20" with "illustrated in Figure 4.11"
4-69	The paragraph starting with, "Poverty statistics	Sentence three. Replace: "illustrated in Figure 4.12" with "illustrated in Figure 4.13"

Page Number	Location	Errata
	from 1990"	
4-69	The paragraph starting with, "The analysis of minority"	Sentence one. Replace: "The analysis of minority and low-income populations" with "As seen in the previous sections, the analysis of minority and low-income populations"
4-70 and 4-71	The paragraph starting with, "In order to help"	Change paragraph to read: "In order to help identify issues, concerns, and desired outcomes for a given community or underrepresented group, key interviews were conducted with community leaders in each location where a public workshop ³ was held. MPOs in the corridor, NCDOT and VDOT representatives, prominent community members, and Internet searches recommended candidates for interviews. Each interview candidate received a package of information on the project, including a personalized letter asking for participation in a telephone interview, the "Time to Act" brochure, a newsletter, and fact sheets. One hundred forty-four information packets were sent."
4-72	The heading starting, "Major Community Concerns"	Change heading format to: italics, no bold
4-72	The paragraph starting with, "The concerns with"	Bullet two. Replace: "rail bridge" to "rail bridge;"
4-84	The paragraph starting with, "Build Alternative: With"	Replace sentences three and four: "Table 4.29 depicts potential schedule conflicts between commuter rail (VRE) and high speed rail (SEHSR). The color-coded blocks show time periods when both passenger rail systems would be at the station designated on the left side of the table. Narrow blocks indicate shorter periods of time while wider blocks indicate longer periods of time. The time period between 8 p.m. and 9 a.m. did not have potential conflicts based on the source data. Based on table 4.29, three VRE trains would have station stops during SEHSR station stops in Fredericksburg, VA, two VRE trains would have station stops during SEHSR station stops in Alexandria, VA, and potentially six VRE trains would have station stops during SEHSR station stops in Washington, D.C."
4-84	Table 4.29	Legend. Insert after "SEHSR" and "VRE": "(Time period of station stop)"
4-84	The paragraph starting with, "There are three potential"	Sentence one. Replace entire sentence with: "The number and frequency of potential schedule conflicts between VRE and SEHSR impacts track configuration, platform size and location, building capacities, parking area capacities, and access to the station."
4-92	The paragraph starting with, "National Register	Sentence six. Replace entire sentence with: "The current number of National Register properties range from 333 in

Page Number	Location	Errata
	Historic Sites -	Study Area Alternatives A, B, D, and E to 291 in Study Area Alternative J. The existing number of Study List properties ranged from 168 in Study Area Alternatives G and H to 58 in Study Area Alternative C. The highest combined number of National Register properties and Study List properties, estimated at 498, are located within Study Area Alternatives D and E while the least number, estimated at 362, are located within Study Area Alternative C".
4-92	Table 4.31	Replace: Table 4.31 with new Table 4.31 at the end of this chapter. The numbers of Historic Sites/ National Register Sites/ Study List Sites has been revised.
4-106	Table 4.38	Replace: Entire table with new Table 4.38 located at the end of this chapter. The Hazardous Material study site buffer has narrowed from 6 miles to 0.5 miles, therefore changing the number of impacted sites. The number of historic sites/National Register/Study List sites has been corrected and revised. The number of conceptual crossings and pedestrian crossings were mistakenly included in this table in the Tier I DEIS, which is intended to show existing known crossings.
5-1	Listing for "Department of Housing and Urban Development"	Revise address to read: Mr. William Stoken / US – HUD VA State Office / 600 E. Broad Street, 3 rd floor / Richmond, VA 23219-1800"
6-4	The paragraph starting with, " <u>Urban</u> : the U.S. Office"	Sentence one. Replace: "(OMB) define the" with "(OMB) defines the"
6-4	The paragraph starting with, "Because the study"	Sentence two. Replace: "to a much lesser extent, suburban areas" with "to a much lesser extent, suburban areas were undersampled"
6-4	The paragraph starting with, "Sampling of more"	Last sentence. Replace: "reported in March and April" with "reported in March and April 2000"
6-5	The paragraph starting with, "Findings from the survey"	Bullet three. Replace: "obtaining project newsletters" with "obtaining project newsletters."

Table ES-1 Study Area Alternatives: Geographic Characteristics									
	Α	В	C	D_	E	F	G	Н	J
Rail Lines	Old RF&P NCRR S-line	Old RF&P S-line NCRR K-line WSSB	Old RF&P S-line NS-line CF-line ACWR	Old RF&P A-line SA-line S-line NCRR	Old RF&P A-line SA-line S-line NCRR K-line WSSB	Old RF&P A-line SA-line S-line NS-line CF-line ACWR	Old RF&P A-line NCRR	Old RF&P A-line NCRR K-line WSSB	Old RF&P A-line NCRR NS-line CF-line ACWR
Segments	1, 2, 3, 5, 6, 13, 14, 15 and 16	1, 2, 3, 5, 6, 13, 14, 16, 17 and 18	1, 2, 3, 5, 6, 13, 19, 20 and 21	1, 6, 7, 8, 9, 11, 13, 14, 15 and 16	1, 6, 7, 8, 9, 11, 13, 14, 16, 17 and 18	1, 6, 7, 8, 9, 11, 13, 19, 20 and 21	1, 7, 8, 9, 10, 12, 13, 14, 15 and 16	1, 7, 8, 9, 10, 12, 13, 14, 16, 17 and 18	1, 7, 8, 9, 10, 12 13, 19, 20 and 21
Communities Served:	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland	Alexandria Woodbridge Fredericksburg Ashland
Virginia	Richmond Centralia Petersburg Burgess La Crosse	Richmond Centralia Petersburg Burgess La Crosse	Richmond Centralia Petersburg Burgess La Crosse	Richmond Chester Colonial Heights Petersburg Collier Emporia	Richmond Chester Colonial Heights Petersburg Collier Emporia	Richmond Chester Colonial Heights Petersburg Collier Emporia	Richmond Chester Colonial Heights Petersburg Collier Emporia	Richmond Chester Colonial Heights Petersburg Collier Emporia	Richmond Chester Colonial Heights Petersburg Collier Emporia
Communities Served:	Norlina Henderson Raleigh	Norlina Henderson Raleigh	Norlina Henderson Raleigh	Weldon Norlina Raleigh Carv	Weldon Norlina Raleigh Carv	Weldon Norlina Raleigh Cary	Weldon Rocky Mount Wilson Selma	Weldon Rocky Mount Wilson Selma	Weldon Rocky Mount Wilson Selma
North Carolina	Cary Durham Burlington Greensboro High Point Lexington Salisbury Charlotte	Cary Durham Burlington Greensboro Kernersville Winston-Salem Lexington Salisbury Charlotte	Cary New Hill Moncure Colon Gulf Robbins Star Troy Norwood Oakboro Aquadale Midland Charlotte	Durham Hillsborough Burlington Greensboro High Point Lexington Salisbury Concord/ Kannapolis Charlotte	Durham Hillsborough Burlington Greensboro Kernersville Winston-Salem Lexington Salisbury Charlotte	New Hill Moncure Colon Gulf Robbins Star Troy Norwood Oakboro Aquadale Midland Charlotte	Clayton Garner Raleigh Cary Durham Hillsborough Burlington Greensboro High Point Lexington Salisbury Concord/ Kannapolis Charlotte	Clayton Garner Raleigh Cary Durham Hillsborough Burlington Greensboro Kernersville Winston-Salem Lexington Salisbury Charlotte	Clayton Garner Raleigh Cary New Hill Moncure Colon Gulf Robbins Star Troy Norwood Oakboro Aquadale Midland Charlotte

Source: Carter & Burgess, Inc, KPMG Ridership and Revenue Projections, September 2000; Compiled by the Resource Group, May 2001

	Summary of	Potential H	uman/Natur	Table ES		of the Study A	∆rea ∆lternat	ives		
Environmental Information	Buffer width for review	A	В	C	D ·	E E	F	G	Н	J
Water Supply Watersheds	6 mi.	- 27	33	19	28	35	21	27	34	21
Major Rivers (potential crossings)	n/a	29	28	29	31	30	33	29	28	31
Wetlands (NWI & hydric soils in acres)	300 ft.	117.3	115.8	117.0	124.0	122.5	123.7	190.7	189.2	190.4
FEMA 100-year Floodplain crossings	n/a	83	76	44	89	82	50	97	90	58
Mineral Resources (Mines)	0.5 mi	36	37	40	37	38	41	33	34	37
Hazardous Materials Sites	0.5 mi.	412	441	252	427	456	267	454	483	294
Air Quality-Net reduction in NOx emissions (lbs/yr)	n/a	554,889	530,895	279, 065	547,392	517,065	269,540	589,505	553,099	298,179
Annual 2025 Trip Diversions	n/a									,
-From auto to rail	2.4	865,349	841,840	595,092	858,004	828,290	585,761	899,266	863,596	613,822
-From air to rail		320,061	311,365	220,103	242,001	233,620	165,215	171,289	164,494	116,918
Estimated Relocations										
-Residential dwellings (each)	n/a	365	371	220	405	411	260	301	307	156
-Business (square footage)	n/a	65,145	110,920	57,374	62,191	107,966	54,420	70,344	116,119	62,573
Noise & Vibration Category 9 sensitive receptors	300 ft.	333	342	259	371	371	287	369	372	284
Prime farmland (acres)	6 mi.	37,219	39,360	26,523	45,137	46,992	34,308	57,346	59,134	46,670
Protected Species - # of known populations identified	6 mi.	33	35	45	44	46	56	43	49	51
National Rivers Inventory	6 mi.	11	11	13	10	11	13	12	13	14
Estimated Relocations	A PRINCIPAL PROPERTY OF THE PR									
-Residential dwellings (each)	n/a	365	371	220	405	411	260	301	307	156
-Business (square footage)	n/a	65,145	110,920	57,374	62,191	107,966	54,420	70,344	116,119	62,573
Historic Sites										
-National Register Sites	1500 ft.	333	333	304	333	333	304	320	320	211
-Study List Sites	1500 ft.	102	102	58	165	165	121	168	168	124
Parks	500 ft.	14	15	11	14	15	11	15	16	12
Gamelands/Public lands (ac.)	500 ft.	5.7	5.7	14	5.7	15.7	15.3	5.7	5.7	15.3
Areas of Environmental. Complexity (high)*	n/a	6	8	4	5	7	3	7	9	5

^{*}Refers to the level of difficulty required to avoid or minimize environmental impacts in a certain area. High areas of complexity are those that would require creative avoidance and minimization techniques and add to the overall construction effort and would require public agency coordination and involvement.

Source: Carter & Burgess, Inc. 2001, compiled the Resource Group May 2001

				Table 2.17					
	Stud	, •	rnatives: O	perational a		1			
Study Area	Α	В	С	D	E	F	G	Н	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	\$2.6215bill ion	\$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	\$0.908 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 3.7
Summary of Hazardous Substance Sites and Superfund Sites
within each Study Area Alternative (0.5 mile buffer)

Alternative	Hazardous Substance Sites (each)
Α	412
В	441
С	252
D	427
E	456
F)	267
G	454
Н	483
J ,	294

Source: EDR; North Carolina Center for Geographic Information Analysis, 1999.

Table 4.10 Hazardous Substance Sites within each Study Area Alternative (0.5-Mile Buffer)						
Study Area Alternative Hazardous Substance Sites						
A	412					
В	441					
С	252					
D	427					
E	456					
F	267					
G	454					
Н	483					
J	294					

Source: EDR; North Carolina Center for Geographic Information

Table 4-11 Explanation of Hazardous Material Sites in Cities and Towns along Study Area (0.5-Mile Buffer)

VIRGINIA

CITY	COUNTY	NAME	EPA_ID	DESCRIPTION OF SITE
RICHMOND	RICHMOND CITY	GESMAR CORP	VA0812988	FINDS,RCRIS-LQG,TRIS
RICHMOND	RICHMOND CITY	REHIG INTERNATIONAL INC	23220RHRGN90	FINDS,RCRIS-LQG,TRIS, CORRACTS,CERCLIS-NFRAP
RICHMOND	RICHMOND CITY	ST. PETERS STREET DRUM SITE	305258	CERCLIS,FINDS
RICHMOND	RICHMOND CITY	VIRGINIA COMMONWEALTH UNIV SANGER HALL	VAD000798645	FINDS,RCRIS-LQG,CORRACTS
RICHMOND	RICHMOND CITY	VIRGINIA DEPT OF TRANSPORTATION RICHMOND	03-96-0262-0	RCRIS-SQG,FINDS,RCRIS-LQG,MLTS
RICHMOND	RICHMOND CITY	SAMPSON COATINGS INC	011655VA 001	AST,RCRIS-SQG,FINDS,TRIS
RICHMOND	RICHMOND CITY	REYNOLDS METAL RICHMOND FOIL	23224RCHMN7T	FINDS,RCRIS-LQG,TRIS
RICHMOND	RICHMOND CITY	WESTVACO CONSUMER PACKAGING DI	23224WSTVC40	FINDS,RCRIS-LQG,TRIS
RICHMOND	RICHMOND CITY	FEC BIOREMEDIATION FACILITY	VAD086293719	FINDS,RCRIS-LQG,RCRIS- TSD,CORRACTS
RICHMOND	RICHMOND CITY	PHILIP MORRIS USA	23234PHLPM70	FINDS,RCRIS-LQG,TRIS
RICHMOND	RICHMOND CITY	AMOCO OIL CO	VA0024627	RCRIS-SQG,FINDS,CORRACTS
RICHMOND	RICHMOND CITY	CARPENTER CO	103#19891218	FINDS,RCRIS-LQG,TRIS, RAATS,CORRACTS
RICHMOND	CHESTERFIELD	KINDER MORGAN DEEPWATER TERM	23234PRMRY33	FINDS,RCRIS-LQG,TRIS
RICHMOND	CHESTERFIELD	WORTHEN IND. INC.	VAD055041339	TRIS
RICHMOND	RICHMOND CITY	FERGUSSON J W & SON INC	103#19950912	FINDS,RCRIS-LQG,TRIS,AST
RICHMOND	RICHMOND CITY	DUPONT E I DE NEMOURS & CO INC	103#19850320	PADS,FINDS,RCRIS-LQG, TRIS,RCRIS-TSD,CORRACTS
PETERSBURG	PETERSBURG CITY	ALLIED SIGNAL INC - TECNICAL CENTER	VA0023118	FINDS,RCRIS-LQG,TRIS
EMPORIA	EMPORIA CITY	STEELFAB OF VA INC.	VAR000004986	TRIS
EMPORIA	EMPORIA CITY	EMPORIA FOUNDRY INC	VA0023405	RCRIS-SQG,FINDS,TRIS,RCRIS-TSD, CORRACTS,LUST
EMPORIA	EMPORIA CITY	GEORGIA PACIFIC EMPORIA	23847GRGPCDA	FINDS,RCRIS-LQG,TRIS
EMPORIA	FULTON	GEORGIA-PACIFIC CORP EMPORIA	VAD039138227	FINDS,RCRIS-LQG,RCRIS-TSD

Source: EDR, Inc. and Center for Geographic Information Analysis; 1999

Table 4.24 Average Population Density in the Impact Area (300-Foot Total Buffer) for Each Study Area Alternative									
Study Area Alternative	Study Area Alternative Ave. Pop. Density 1990 (300 ft) Ave. Pop. Density 1999 (300 ft) 2004 (300 ft)								
A	2329	2633	2806						
В	2280	2571	2734						
С	2207	2495	2683						
D	2417	2682	2837						
E	2369	2626	2774						
F	2370	2607	2765						
G	2382	2645	2799						
Н	2333	2589	2736						
J	2313	2545	2703						

His	Table 4.31 Historic Sites by Study Area Alternative								
Study Area Alternative	Study Area Alternative National Register Historic Sites Study List Historic Sites								
A	333	102							
В	333	102							
С	304	58							
D	333	165							
E	333	165							
F	304	121							
G	320	168							
Н	320	168							
J	291	124							

Source: North Carolina and Virginia State Historic Preservation Offices, 1999. Complied AG&M, 2000

Table 4.38
Summary of Potential Impacts and Benefits of the Study Area Alternatives

	Study Area Alternatives Study Area Alternatives								
Impact Areas	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
4.2.2 National Rivers Inventory	11	11	13	10	11	13	12	13	14

Impact Areas	Study Area Alternatives								
	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G	Alternative H	Alternative
4.3.1.1Community Impacts	- ^ -	В	C	<u> </u>		F		n	3
Sites with potential impacts in areas of									
Environmental concern	5	6	5	4	5	4	4	4	4
Environmental concern		l o	3	7	3	7	7		7
4.3.1.2Environmental Justice									
Populations						•]		
% Minority population (1999)	39%	39%	37%	43%	43%	43%	41%	41%	40%
% Low Income Households (1999)	47%	48%	43%	48%	48%	46%	47%	47%	44%
(300 ft buffer)									
4.3.1.5 Acquisition/Relocation									
Acres to be acquired	678	731	930	620	674	872	545	598	797
# Residential relocations (each)	365	371	220	405	411	260	301	307	156
Business relocations (sq ft)	65,145	110,92	57,374	62,191	107,96	54,420	70,344	116,11	62,573
		0			6			9	
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	333	333	304	333	333	304	320	320	211
Study List Sites	102	102	58	165	165	121	168	168	124
(1500ft buffer)	102	102	36	103	103	121	100	100	124
(1300it buller)									
Section 4(f) and Section 6 (f)									
properties									
Parks	14	15	11	14	15	11	15	16	12
Gamelands/Public lands (acres)	5.7	5.7	14	5.7	15.7	15.3	5.7	5.7	15.3
(See 4.3.1.8 above for historic sites)									

^{*} 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