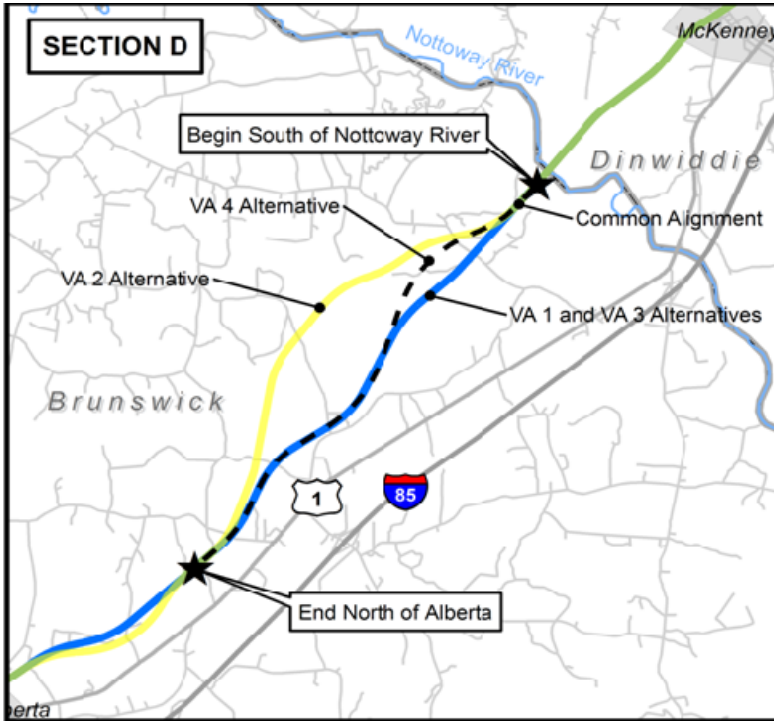


Section D- Comparison of Alternatives

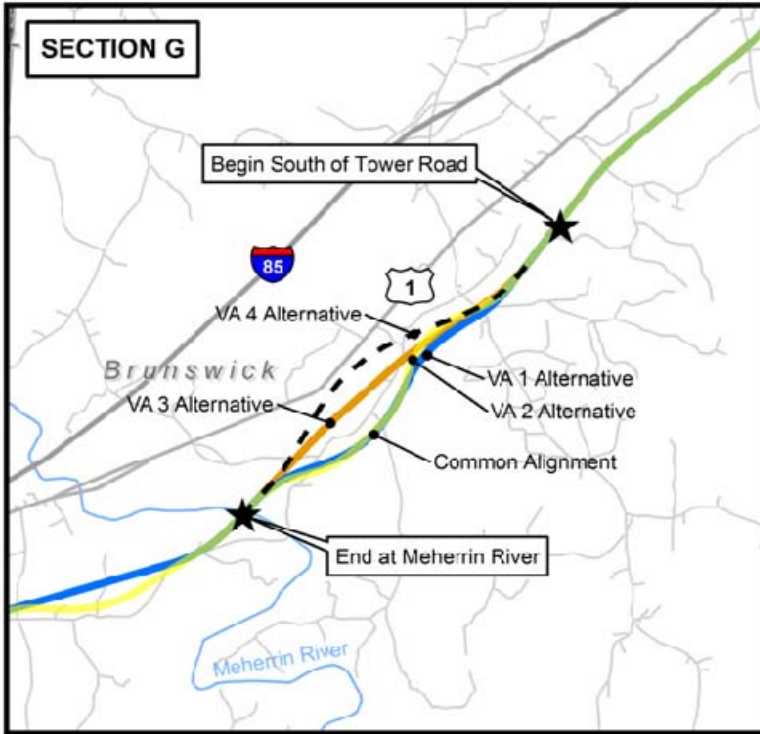


In Section D Alternative VA4 was developed to minimize impacts to wetlands, historic resources and an endangered plant species.

The table below compares impacts to the human and natural environment for the alternatives in this section. It also provides information on the costs and constructability of the alternatives. All alternatives are still under consideration- no decisions have been made.

Section D- Alternatives VA1, VA3 on Common Alignment, Alternatives VA2 and VA4 on Different Alignments									
Summary of Potential Human and Natural Impacts					Summary of Operational & Physical Characteristics				
By Section					By Section				
Topic	SECTION D				Topic	SECTION D			
	VA1	VA2	VA3	VA4		VA1	VA2	VA3	VA4
Federally Listed T&E Species Impacted	1	0	1	0	Mainline Track Length (miles)	6.07	6.41	6.07	6.17
Number of Stream Crossings	14	12	14	13	Limiting Speed**	110	110	110	110
Impacts to Streams (linear feet)	2,050	2,575	2,050	2,069	Operability/Constructability***	neutral	neutral	neutral	neutral
Impacts to Wetlands (acres)	0.99	7.37	0.99	2.32	Roadwork (miles)	1.6	1.5	1.6	2.1
FEMA Floodplain Crossings	0	4	0	0					
Federal/State Designated Rivers (crossings)	0	0	0	0					
Impacts to Prime and Other Important Farmland (acres)	80.45	54.45	80.45	89.27					
Forested uplands (acres)	90.99	92.24	90.99	107.72	Rail and Road Construction Cost (millions \$)	\$67.20	\$53.40	\$67.20	\$67.00
Hazardous Materials Sites	0	1	0	1	Utility Relocation Cost (millions \$)	\$1.28	\$0.66	\$1.28	\$1.30
Residential Relocations	3	2	3	3	Right-of-Way Cost (millions \$)	\$1.82	\$1.00	\$1.82	\$1.85
Business Relocations	2	0	2	2	TOTAL COSTS (millions \$)	\$70.30	\$55.06	\$70.30	\$70.15
Public Schools Impacted	0	0	0	0	** Limiting Speed is the maximum train speed through the most restrictive curve within the section based on current design assumptions; average running speed through the section could be greater. *** Positive-negative-neutral denotes significant differences in operability or constructability between the alternatives (see DEIS Section 2.2.1.3 for more details).				
Noise (Impacted Receptors)	2	3	2	4					
Noise (Severely Impacted Receptors)	2	1	2	2					
Vibration (Impacted Structures)	3	1	3	2					
Section 4(f) Uses- Historic	1	0	1	0					
Section 4(f) Uses- Parks	0	0	0	0					
Section 4(f) De Minimis- Historic	0	1	0	1					
Section 4(f) De Minimis- Parks	0	0	0	0					
Section 106 Adverse Effects	1	0	1	0					

Section G- Comparison of Alternatives



In Section G Alternative VA4 was developed to avoid impacts to historic resources and reduce property impacts (compared to VA3).

The table below compares impacts to the human and natural environment for the alternatives in this section. It also provides information on the costs and constructability of the alternatives. All alternatives are still under consideration- no decisions have been made.

Section G- Alternatives VA1, VA2, VA3, VA4 on Different Alignments

Summary of Potential Human and Natural Impacts					Summary of Operational & Physical Characteristics				
By Section					By Section				
Topic	SECTION G				Topic	SECTION G			
	VA1	VA2	VA3	VA4		VA1	VA2	VA3	VA4
Federally Listed T&E Species Impacted	0	0	0	0	Mainline Track Length (miles)	3.61	3.66	3.55	3.62
Number of Stream Crossings	7	7	6	9	Limiting Speed**	110	90	110	110
Impacts to Streams (linear feet)	654	914	500	1,095	Operability/Constructability***	neutral	negative	positive	positive
Impacts to Wetlands (acres)	0.21	0.49	0.21	0.21	Roadwork (miles)	0.7	0.3	0.6	0.91
FEMA Floodplain Crossings	1	1	1	1					
Federal/State Designated Rivers (crossings)	1	1	1	1					
Impacts to Prime and Other Important Farmland (acres)	25.02	24.96	28.98	49.43					
Forested uplands (acres)	45.54	44.59	43.58	47.55	Rail and Road Construction Cost (millions \$)	\$35.90	\$29.00	\$36.20	\$40.00
Hazardous Materials Sites	0	0	0	0	Utility Relocation Cost (millions \$)	\$0.19	\$0.16	\$0.19	\$0.19
Residential Relocations	0	0	2	1	Right-of-Way Cost (millions \$)	\$0.37	\$0.31	\$0.53	\$0.54
Business Relocations	0	0	0	0	TOTAL COSTS (millions \$)	\$36.46	\$29.47	\$36.92	\$40.73
Public Schools Impacted	0	0	0	0	** Limiting Speed is the maximum train speed through the most restrictive curve within the section based on current design assumptions; average running speed through the section could be greater. *** Positive-negative-neutral denotes significant differences in operability or constructability between the alternatives (see DEIS Section 2.2.1.3 for more details).				
Noise (Impacted Receptors)	0	1	2	2					
Noise (Severely Impacted Receptors)	0	0	0	0					
Vibration (Impacted Structures)	1	0	1	0					
Section 4(f) Uses- Historic	1	0	1	0					
Section 4(f) Uses- Parks	0	0	0	0					
Section 4(f) De Minimis- Historic	0	1	0	0					
Section 4(f) De Minimis- Parks	0	0	0	0					
Section 106 Adverse Effects	1	0	1	0					