



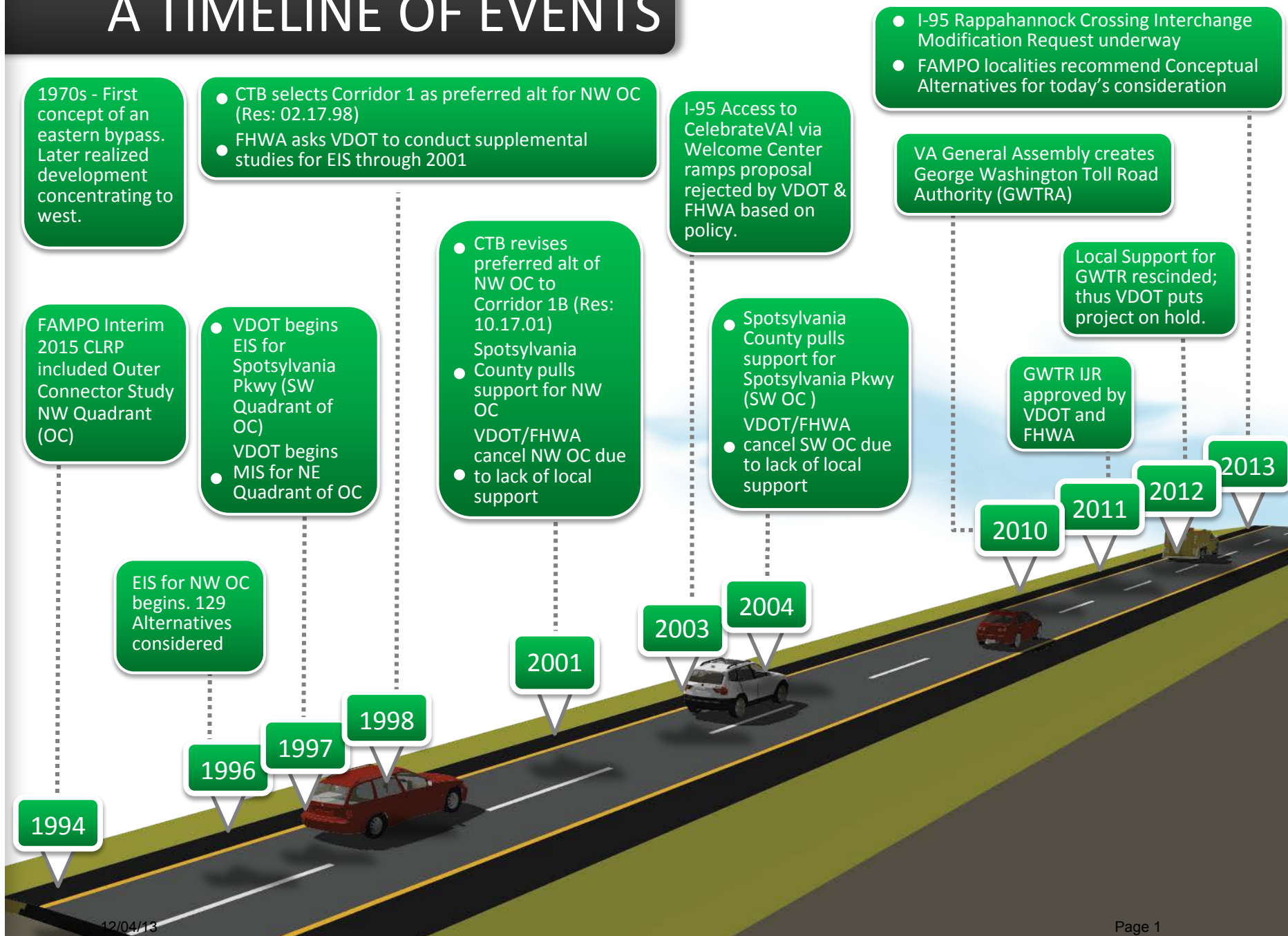
**Fredericksburg Area Congestion Relief Study:
*Evaluation of Conceptual Alternatives***

December 4, 2013

Quintin D. Elliott

Fredericksburg District Administrator

A TIMELINE OF EVENTS



1970s - First concept of an eastern bypass. Later realized development concentrating to west.

- CTB selects Corridor 1 as preferred alt for NW OC (Res: 02.17.98)
- FHWA asks VDOT to conduct supplemental studies for EIS through 2001

I-95 Access to CelebrateVA! via Welcome Center ramps proposal rejected by VDOT & FHWA based on policy.

- I-95 Rappahannock Crossing Interchange Modification Request underway
- FAMPO localities recommend Conceptual Alternatives for today's consideration

FAMPO Interim 2015 CLRP included Outer Connector Study NW Quadrant (OC)

- VDOT begins EIS for Spotsylvania Pkwy (SW Quadrant of OC)
- VDOT begins MIS for NE Quadrant of OC

- CTB revises preferred alt of NW OC to Corridor 1B (Res: 10.17.01)
- Spotsylvania County pulls support for NW OC
- VDOT/FHWA cancel NW OC due to lack of local support

- Spotsylvania County pulls support for Spotsylvania Pkwy (SW OC)
- VDOT/FHWA cancel SW OC due to lack of local support

VA General Assembly creates George Washington Toll Road Authority (GWTRA)

Local Support for GWTR rescinded; thus VDOT puts project on hold.

GWTR IJR approved by VDOT and FHWA

EIS for NW OC begins. 129 Alternatives considered

1994

1996

1997

1998

2001

2003

2004

2010

2011

2012

2013

Conceptual Purpose and Need

Purpose

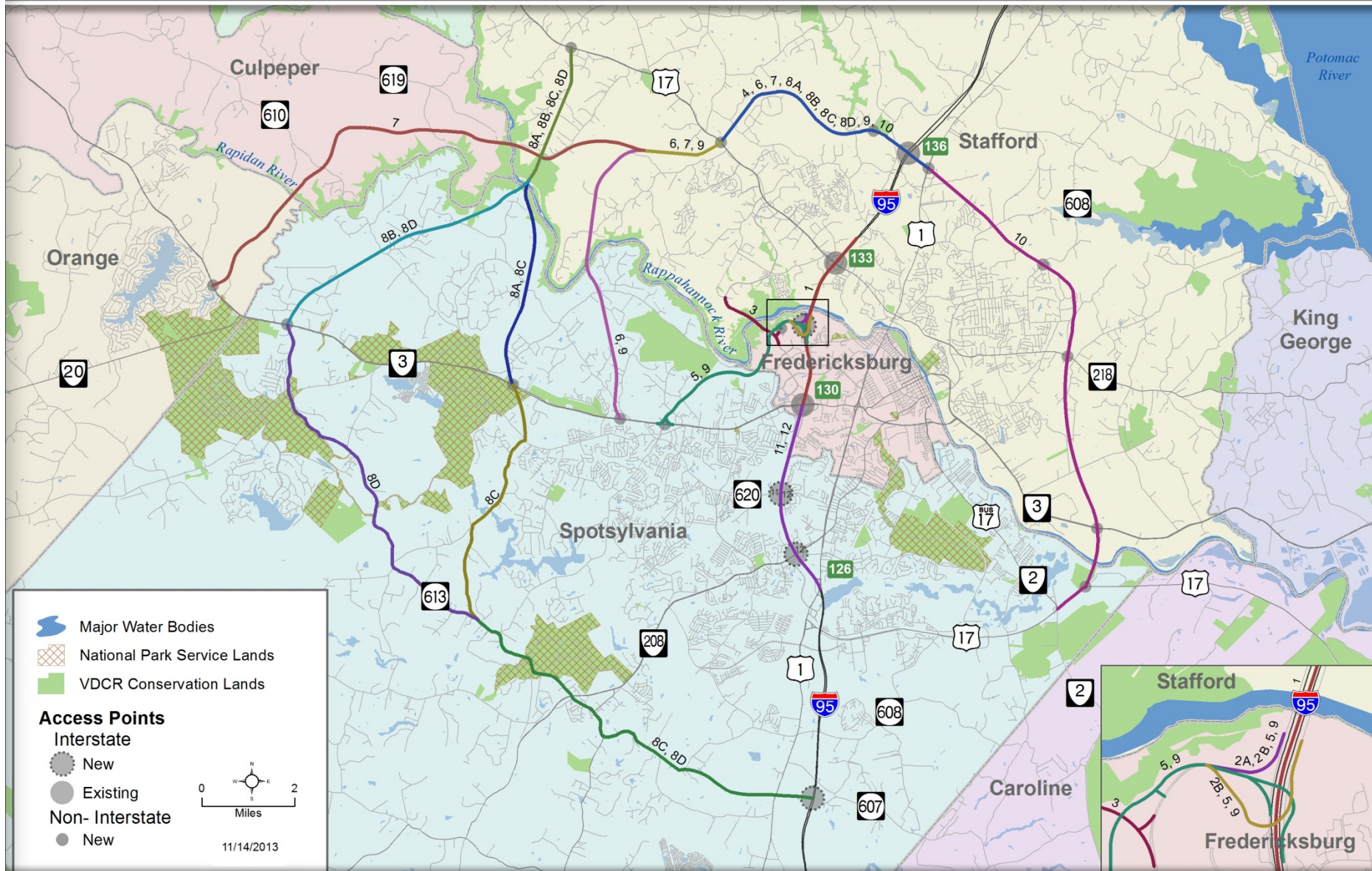
- Evaluate Alts that reduce congestion in Fredericksburg Study Area
- Identify Alts that improve traffic operations and accommodate commerce along I-95, US 17, & Route 3 in study area

Need

- Existing and future congestion, failing LOS, accidents, gridlock
- I-95 & US 17 are Corridors of Statewide Significance

Not Necessarily a Bypass

All Conceptual Alternatives



Fredericksburg Area Congestion Relief Study: Conceptual Alternatives

Alt. # ¹	Alternative Descriptions	Source of Conceptual Alternative
Baseline Alt 1	UPC #101595. New I-95 CD Lanes & Bridges from Exit 130 (Rte 3) to Exit 133 US 17), plus Flyover & Ramp Improvements @ Exit 133. In addition, Baseline Alt 1 would include non-highway construction-related multi-modal initiatives to enhance alternative modes usage and efficiency. These multi-modal initiatives are still to be determined. Baseline Alt 1 is to be constructed, and as such, it is a part of all proposed alternatives that follow. Because it is part of the future, baseline condition, it will not be screened as part of this evaluation process.	VDOT
Alt 2A	New Slip-Ramp from I-95 Southbound (SB) via CD Roadway to Central Park/Celebrate Virginia I-95 southbound (SB) Exit Only. Includes Alt 1.	VDOT
Alt 2B	New Alt 2A plus northbound (NB) Flyover Access to I-95. Includes Alt 1.	VDOT
Alt 3	New Connection from Celebrate VA North at Celebrate Virginia Pkwy to Celebrate Virginia south at Gordon Shelton Blvd. Includes Alt 1.	VDOT
Alt 4	New Stafford Parkway with access at Rte 1, I-95 (Exit 136), Centerport Pkwy, and Rte 17. Includes Alt 1.	Portion of VDOT OC NWQ (2001) – Included in this study by VDOT
Alt 5	New I-95 Interchange at Welcome Center (westbound travel only), plus New Connector Rd from New Interchange to Gordon Rd to Rte 3. Includes Alt 1.	VDOT IJR (2009) – Included in this study by VDOT
Alt 6	New Outer Connector "Corridor 4B" with access at Rte 1, I-95 (Exit 136), Centerport Pkwy, Rte 17, and Rte 3. Includes Alt 1.	VDOT OC NWQ (2001) – Included in this study by VDOT
Alt 7	New Spotsylvania County Bypass with access at Rte 3 near Westover Pkwy in Orange County, plus Alt 4 with access at Rte 1, I-95 (Exit 136), Centerport Pkwy, Rte 17, and Rte 3. Includes Alt 1.	Spotsylvania County/FAMPO (2013) – Introduced by Spotsy Co in this study (BOS resolution 09/24/13)
Alt 8A	New Bypass with access at Rte 17 near Rte 649 (Richland Road) and Rte 3 near McLaws Drive. Includes Alt 1 and Alt 4.	Stafford County/FAMPO (2013) – Introduced by Stafford County in this study (BOS resolution 10/15/13)
Alt 8B	New Bypass with access at Rte 17 near Rte 649 (Richland Road) and Rte 3 at Rte 613 (Brock Rd). Includes Alt 1 and Alt 4.	Stafford County/FAMPO (2013) Note: This Alt is a logical derivation of one of the Stafford Alts (BOS res 10/15/13)
Alt 8C	Following existing roadways as much as possible, Alt 8C would provide an improved, 4-lane arterial with traffic signals and unlimited access. Includes Alt 8A and would connect to Alt 8A at Rte 3 near McLaws Drive and terminate at new I-95 interchange near Rte 607 (Guinea Station Rd). Includes Alt 1 and Alt 4.	Stafford County/FAMPO (2013) – Introduced by Stafford County in this study (BOS resolution 10/15/13)
Alt 8D	Following existing roadways as much as possible, Alt 8D would provide an improved, 4-lane arterial with traffic signals and unlimited access. Includes Alt 8B and would connect to Alt 8B at Rte 3 near Rte 613 (Brock Rd) and terminate at a new I-95 interchange near Rte 607 (Guinea Station Rd). Includes Alt 1 and Alt 4.	Stafford County/FAMPO (2013) – Introduced by Stafford County in this study (BOS resolution 10/15/13)
Alt 9	Combination of Alt 5 and Alt 6. Includes Alt 1.	FAMPO (2013) – Supported by FAMPO resolution 10/21/13

Fredericksburg Area Congestion Relief Study: Conceptual Alternatives

Alt. # ¹	Alternative Descriptions	Source of Conceptual Alternative
Alt 10	New Northeastern Quadrant of the Outer Connector, including Alt 4, with additional access at Rte 608 (Brooke Rd), Rte 218 (White Oak Road), Rte 3, and Rte 2. Includes Alt 1.	From VDOT Outer Connector NEQ Study (1997) – Supported by Stafford County in this study (BOS resolution 10/15/13)
Alt 11	Extension of Alt 1 CD roads to I-95 Exit 126, with new interchange at Rte 620 (Harrison Rd). Includes Alt. 1.	Introduced by Spotsylvania County, modified by FAMPO (FAMPO Policy Committee 11/21/13)
Alt 12	Includes Alt 11 with an extension of CD roads to I-95 Exit 126 with new interchange at Rte 620 (Harrison Rd), plus another new interchange at Rte 208 (Courthouse Rd). Includes Alt 1.	Introduced by Spotsylvania County, modified by FAMPO (FAMPO Policy Committee 11/21/13)

All Alternatives on new location are assumed to be four-lane, divided, limited access facility.

Fredericksburg Area Congestion Relief Study: 1st Screening of Conceptual Alternatives

Conceptual Alt. # ¹	Length in Miles ²	2019 Planning Level Cost \$Millions ³	Traffic Impacts				Policy Considerations		Environmental Impacts				
			Average Daily Traffic (ADT) Served by Alt ⁴	Ratio of ADT to Cost ⁵	Travel Time Savings ⁶	Benefit to Regional Vehicle Hours of Delay (VHD) ⁷	Consistency with Local & Regional Plans ⁸	Federal Approval of Interstate Access (FHWA) ⁹	NPS Park Land ¹⁰	Civil War Battlefields ¹¹	Conservation Easements ¹²	Scenic & Recreational Rappahannock & Rapidan Rivers ¹³	Relocations - Residential & Business ¹⁴
Alt 2A	0.5	\$18	●	■	●	●	□	■	●	●	●	●	●
Alt 2B	1.5	\$37	■	■	●	●	□	■	●	●	●	●	●
Alt 3	1.6	\$104	■	■	●	●	●	●	●	●	■	■	□
Alt 4	5.1	\$235	□	■	□	□	■	□	●	●	□	●	□
Alt 5	5.8	\$284	■	■	■	□	■	■	●	●	□	●	■
Alt 6	13.5	\$562	■	■	■	■	□	□	●	●	■	■	■
Alt 7	18.1	\$630	□	□	■	■	□	□	●	■	■	■	■
Alt 8A	12.8	\$565	■	■	■	■	□	□	■	■	■	■	■
Alt 8B	14.4	\$684	□	●	■	■	□	□	●	■	■	■	■
Alt 8C	27.5	\$1,135	■	●	■	■	□	■	■	■	■	■	■
Alt 8D	32.1	\$1,475	□	●	■	■	□	■	■	■	■	■	■
Alt 9	19.3	\$846	■	■	■	■	■	■	●	●	■	■	■
Alt 10	16.6	\$865	■	□	■	■	■	□	●	●	■	■	■
Alt 11	4.3	\$341	■	■	□	●	□	■	●	●	●	●	■
Alt 12	4.3	\$515	■	■	□	●	□	■	●	●	●	●	■

Legend

Negative Impacts		Positive Impacts	
●	Neutral / Minimal / No Negative Impact or Resistance	●	Neutral / Minimal / No Positive Impact
□	Low Negative Impact or Resistance	□	Low Positive Impact
■	Medium Negative Impact or Resistance	■	Medium Positive Impact
■	High Negative Impact or Resistance	■	High Positive Impact

Fredericksburg Area Congestion Relief Study: 1st Screening Footnotes

The categories chosen for the 1st Screening are those most often found to be challenging during project development. The human and natural resources identified have particularly protective regulations and equally as strong public sentiments regarding public perceptions of impacts. Additional criteria such as more detailed traffic, wetlands, and protected species are evaluated in the 2nd Screening.

Footnote #	Footnote Heading	Explanation	Range Definition							
			No Negative Impact	Low Negative Impact	Medium Negative Impact	High Negative Impact	No Positive Impact	Low Positive Impact	Medium Positive Impact	High Positive Impact
1	Alt. #	Sources of Alts include previous VDOT studies from 1980s to present, as well as suggestions provided by the City of Fredericksburg and Spotsylvania & Stafford Co at joint GWRC & FAMPO Meeting on 10/21/13.	●	●	●	●	●	●	●	●
2	Length in Miles	Distance of conceptual alternative, in miles.	●	●	●	●	●	●	●	●
3	Planning Level Cost (2019)	Preliminary estimates only. Estimates for purposes of screening. Pre-Scoping level cost estimates include PE, RW/UT, and CN costs. Cost presented is the average taken from the combined low and high cost estimates.	\$0	\$1 - \$299 M	\$300 M - \$599 M	\$600 M and Up	●	●	●	●
4	Average Daily Traffic (ADT) Served by Alt	Potential maximum amount of average daily traffic served on new infrastructure.	●	●	●	●	0-14,999	15,000-29,999	30,000-59,999	> 60,000
5	Ratio of ADT to Cost	Quotient of ADT and planning level costs (Footnotes 4 and 3 above) with costs measured in \$millions. Does not include Alt 4 costs for alternatives comprised of multiple alternatives for purposes of calculating this ratio.	●	●	●	●	0-50	51 to 100	101 to 250	251 and up
6	Travel Time Savings	6.Total Travel Time Savings for AM travel runs on the following routes when compared to Alternative 1: NB I-95 from Exit 126 to Exit 136, SB I-95 from Exit 136 to Exit 126, Route 3 at Andora Drive (Rte 626) to I-95 to Route 17 at Popular Road (Rte 616) and PM travel runs on the following routes when compared to Alternative 1: NB I-95 from Exit 126 to Exit 136, SB I-95 from Exit 136 to Exit 126, Route 17 at Popular Road (Rte 616) to I-95 to Route 3 at Andora Drive (Rte 616). Base total travel time for Alternative 1 is 164 minutes.	●	●	●	●	< 5 Minutes	5 - 15 Minutes	15 - 45 Minutes	> 45 Minutes
7	Benefit to Regional Vehicle Hours of Delay (VHD)	Percent reduction in vehicle hours of delay (VHD) at a regional level, when comparing the Alternative to the Baseline Alternative 1 condition. The region includes the localities within FAMPO.	●	●	●	●	Less than 2.0%	2.1% to 4.0%	4.1% to 8.0%	Greater than 8.0%
8	Consistency with Local & Regional Plans	Based on an Alt's inclusion in the locality's Comp Plan and/or FAMPO's CLRP.	●	●	●	●	No portion of Alt in locality's current Comprehensive Plan (Needs Element) <i>or</i> FAMPO CLRP	Portion of Alt in locality's current Comprehensive Plan (Needs Element) <i>or</i> FAMPO CLRP	Entire Alt in Locality's Current Comprehensive Plan (Needs Element) <i>or</i> FAMPO CLRP	Entire Alt in Locality's Current Comprehensive Plan (Needs Element) & FAMPO CLRP
9	Federal Approval of Interstate Access (FHWA)	Anticipated difficulty of reaching FHWA approval based on stated federal policy and past VDOT experience in similar situations across Virginia.	No FHWA Approval or Minimal FHWA Coordination or Approval	IMR required	Full new IJR required (some previous vetting)	Full new IJR required (no previous vetting)	No FHWA Approval or Minimal FHWA Coordination or Approval	●	FHWA IJR Approval for Similar Alt in Hand	FHWA IJR Approval in Hand

Fredericksburg Area Congestion Relief Study: 1st Screening Footnotes

The categories chosen for the 1st Screening are those most often found to be challenging during project development. The human and natural resources identified have particularly protective regulations and equally as strong public sentiments regarding public perceptions of impacts. Additional criteria such as more detailed traffic, wetlands, and protected species are evaluated in the 2nd Screening.

Footnote #	Footnote Heading	Explanation	Range Definition							
			No Negative Impact ●	Low Negative Impact □	Medium Negative Impact ■	High Negative Impact ■	No Positive Impact ●	Low Positive Impact □	Medium Positive Impact ■	High Positive Impact ■
10	NPS Park Lands	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Based on acreage within lands administered by the National Park Service (NPS). If federal funding is used, this becomes a Section 4(f) issue in which avoidance alternatives must be considered. It must be demonstrated that there is no prudent and feasible alternative to the use of the NPS lands in order to use NPS lands as a part of this alternative.	No NPS Lands within Corridor	0.1 to 0.5 Acre	0.6 to 1 Acre	1.1 Acres and Up	●	●	●	●
11	Civil War Battlefields	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Degree of impact is based on acreage within Civil War Battlefields. These battlefield boundaries were determined by the Dept. of Historic Resources (DHR) as being potentially eligible for the National Register of Historic Places (NRHP). If federal funds are used, this becomes a Section 4(f) issue, as noted in the footnote #5, and avoidance alternatives must be considered. In addition, these battlefield areas are protected under Section 106 of the National Historic Preservation Act. As such, any federal action, be it federal funding for construction or the issuance of a federal water quality permit from the Corps of Engineers, must take into consideration impacts to these resources. The Corps of Engineers is obligated to permit only the Least Environmentally Damaging Practicable Alternative (LEDPA) and it is unlikely that permits would be issued for this alternative given these impacts.	No Known, Potentially Eligible, Civil War Battlefields within Corridor	0.1 to 25 Acres	25.1 to 50 Acres	50.1 Acres and Up	●	●	●	●
12	Lands with Conservation Easements	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Degree of impact based on acreage within Conservation Easements from the Dept. of Conservation & Recreation (DCR), the Virginia Outdoor Foundation (VOF), the City of Fredericksburg, and The Nature Conservancy (TNC). This is a Section 4(f) resource, in addition to being subject to an Open Space Easement managed by the VOF.	No Conservation Lands	0.1 to 20 Acres	20.1 to 40 Acres	40.1 Acres and Up	●	●	●	●
13	Scenic & Recreational Rappahannock / Rapidan Rivers	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Any additional crossing not adjacent to the existing I-95 bridges is considered to have a high negative impact to scenic, recreational, and historic values of the Virginia Designated State Scenic Rappahannock River.	No new river crossings	New river crossing adjacent to existing I-95 bridges	●	New river crossing not adjacent to existing I-95 bridges	●	●	●	●

Fredericksburg Area Congestion Relief Study: 1st Screening Footnotes

The categories chosen for the 1st Screening are those most often found to be challenging during project development. The human and natural resources identified have particularly protective regulations and equally as strong public sentiments regarding public perceptions of impacts. Additional criteria such as more detailed traffic, wetlands, and protected species are evaluated in the 2nd Screening.

Footnote #	Footnote Heading	Explanation	Range Definition							
			No Negative Impact ●	Low Negative Impact □	Medium Negative Impact ■	High Negative Impact ■	No Positive Impact ●	Low Positive Impact □	Medium Positive Impact ■	High Positive Impact ■
14	Relocations (Residential & Business)	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Based on number of structures within 500' wide corridor of each alternative.	No Residential or Commercial Relocations	1 to 49 Structures	50 to 99 Structures	100 & Up Structures	●	●	●	●

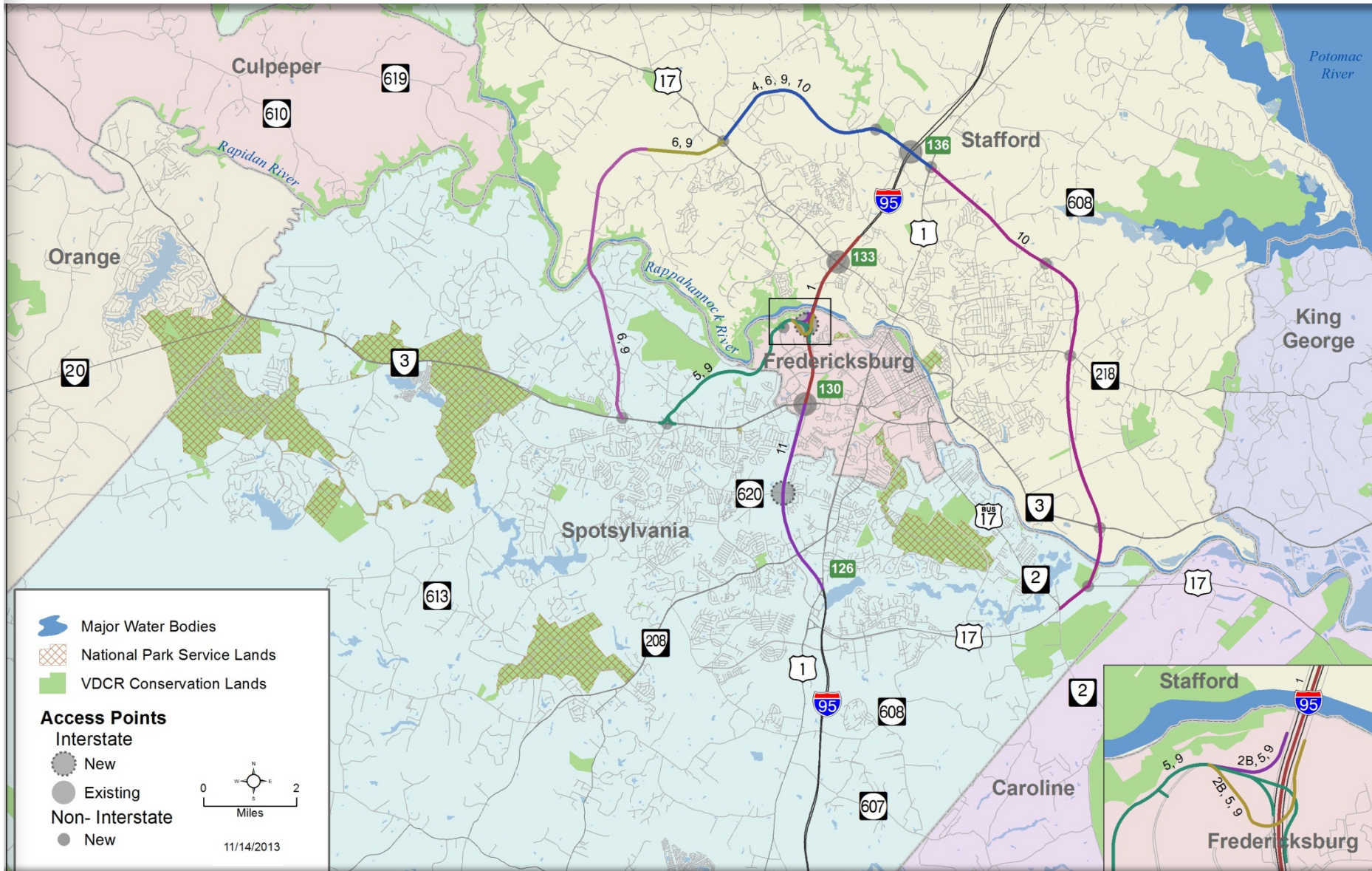
Fredericksburg Area Congestion Relief Study: 1st Screening Results

Conceptual Alt. # ¹	Length in Miles ²	2019 Planning Level Cost \$Millions ³	Traffic Impacts				Policy Considerations		Environmental Impacts				
			Average Daily Traffic (ADT) Served by Alt ⁴	Ratio of ADT to Cost ⁵	Travel Time Savings ⁶	Benefit to Regional Vehicle Hours of Delay (VHD) ⁷	Consistency with Local & Regional Plans ⁸	Federal Approval of Interstate Access (FHWA) ⁹	NPS Park Land ¹⁰	Civil War Battlefields ¹¹	Conservation Easements ¹²	Scenic & Recreational Rappahannock & Rapidan Rivers ¹³	Relocations - Residential & Business ¹⁴
Alt 2B	1.5	\$37 □	■	■	●	●	□	■	●	●	●	●	●
Alt 4	5.1	\$235 □	□	■	□	□	■	□	●	●	□	●	□
Alt 5	5.8	\$284 □	■	■	■	□	■	■	●	●	□	●	■
Alt 6	13.5	\$562 ■	■	■	■	■	□	□	●	●	■	■	■
Alt 9	19.3	\$846 ■	■	■	■	■	□	□	●	●	■	■	■
Alt 10	16.6	\$865 ■	■	□	■	■	■	□	●	●	■	■	■
Alt 11	4.3	\$341 ■	■	■	□	●	□	■	●	●	●	●	■

Legend

Negative Impacts		Positive Impacts	
●	Neutral / Minimal / No Negative Impact or Resistance	●	Neutral / Minimal / No Positive Impact
□	Low Negative Impact or Resistance	□	Low Positive Impact
■	Medium Negative Impact or Resistance	■	Medium Positive Impact
■	High Negative Impact or Resistance	■	High Positive Impact

1st Screening Results



Fredericksburg Area Congestion Relief Study: 2nd Screening of Conceptual Alternatives

Alt. # ¹	Length in Miles ²	2019 Planning Level Cost \$Millions ³	Traffic Impacts							Policy Considerations			Environmental Impacts						
			Average Daily Traffic (ADT) Served by Alt ⁴	Ratio of ADT to Cost ⁵	Benefit to Regional Vehicle Hours of Delay (VHD) ⁶	Travel Time Savings ⁷	Benefit to I-95 ⁸	Benefit to US 17 ⁹	Benefit to Rte 3 ¹⁰	Consistency with Local & Regional Plans ¹¹	Federal Approval for Interstate Access (FHWA) ¹²	Federal Approval (Env. Permits) ¹³	NPS Park Land ¹⁴	Civil War Battlefields ¹⁵	Conservation Easements ¹⁶	Scenic & Recreational Rappahannock & Rapidan Rivers ¹⁷	Protected Species ¹⁸	Wetlands ¹⁹	Relocations Residential & Business ²⁰
Alt 2B	1.5	\$37	□	■	●	●	●	●	●	□	■	□	●	●	●	●	●	□	●
Alt 4	5.1	\$235	□	■	□	□	□	□	■	□	□	●	●	□	●	●	□	□	□
Alt 5	5.8	\$284	□	■	□	■	□	●	■	□	■	□	●	●	□	●	●	□	■
Alt 6	13.5	\$562	■	■	■	■	■	■	■	□	□	●	●	■	■	■	■	■	■
Alt 9	19.3	\$846	■	■	■	■	■	■	■	□	□	●	●	■	■	■	■	■	■
Alt 10	16.6	\$865	■	□	■	■	■	■	●	■	□	●	●	■	■	●	■	■	■
Alt 11	4.3	\$341	■	■	●	□	●	●	□	□	■	●	●	●	●	●	□	■	■

Legend

Negative Impacts		Positive Impacts	
●	Neutral / Minimal / No Negative Impact or Resistance	●	Neutral / Minimal / No Positive Impact
□	Low Negative Impact or Resistance	□	Low Positive Impact
■	Medium Negative Impact or Resistance	■	Medium Positive Impact
■	High Negative Impact or Resistance	■	High Positive Impact

Fredericksburg Area Congestion Relief Study: 2nd Screening Footnotes

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Footnote #	Footnote Heading	Explanation	Range Definition									
			No Negative Impact ●	Low Negative Impact □	Medium Negative Impact ■	High Negative Impact ■	No Positive Impact ●	Low Positive Impact □	Medium Positive Impact ■	High Positive Impact ■		
1	Alt. #	Sources of Alternatives include previous VDOT studies from 1980s to present, as well as suggestions provided by the City of Fredericksburg and Spotsylvania & Stafford Co at joint GWRC & FAMPO Meeting on 10/21/13.	●	●	●	●	●	●	●	●	●	●
2	Length in Miles	Distance of conceptual alternative, in miles.	●	●	●	●	●	●	●	●	●	●
3	Planning Level Cost (2019)	Preliminary estimates only. Estimates for purposes of screening. Pre-Scoping level cost estimates include PE, RW/UT, and CN costs. Cost presented is the average taken from the combined low and high cost estimates.	\$0	\$1 - \$299 M	\$300 M - \$599 M	\$600 M and Up	●	●	●	●	●	●
4	Average Daily Traffic (ADT) Served by Alt	Potential maximum amount of average daily traffic (ADT) served on new infrastructure. Includes summation of alternatives when alts are combinations of other alternatives (e.g., Alt 9 includes Alts 4 and 5).	●	●	●	●	0-14,999	15,000-29,999	30,000-59,999	> 60,000		
5	Ratio of ADT to Cost	Quotient of ADT and planning level costs (Footnotes 4 and 3 above) with costs measured in \$millions. Does not include Alt 4 costs for alternatives comprised of multiple alternatives for purposes of calculating this ratio.	●	●	●	●	0-50	51 to 100	101 to 250	251 and up		
6	Benefit to Regional Vehicle Hours of Delay (VHD)	Percent reduction in vehicle hours of delay (VHD) at a regional level, when comparing the Alternative to the Baseline Alternative 1 condition. The region includes the localities within FAMPO.	●	●	●	●	Less than 1.0%	1.1% to 6.0%	6.1% to 10.0%	Greater than 10.0%		
6	Travel Time Savings	Total Travel Time Savings for AM travel runs on the following routes when compared to Alternative 1: NB I-95 from Exit 126 to Exit 136, SB I-95 from Exit 136 to Exit 126, Route 3 at Andora Drive (Rte 626) to I-95 to Route 17 at Popular Road (Rte 616) and PM travel runs on the following routes when compared to Alternative 1: NB I-95 from Exit 126 to Exit 136, SB I-95 from Exit 136 to Exit 126, Route 17 at Popular Road (Rte 616) to I-95 to Route 3 at Andora Drive (Rte 616). Base total travel time for Alternative 1 is 164 minutes.	●	●	●	●	< 5 Minutes	5 - 15 Minutes	16 - 45 Minutes	> 45 Minutes		
8	Benefit to I-95	Percent reduction in vehicle miles of travel (VMT) on I-95 between Exit 126 and Exit 136, when comparing the Alternative to the Baseline Alternative 1 condition.	●	●	●	●	Less than 2.0%	2.1% to 4.0%	4.1% to 8.0%	Greater than 8.0%		
9	Benefit to US 17	Percent reduction in vehicle miles of travel (VMT) on Route 17 between I-95 and proposed Stafford Parkway, when comparing the Alternative to the Baseline Alternative 1 condition.	●	●	●	●	Less than 1.0%	1.1% to 6.0%	6.1% to 10.0%	Greater than 10.0%		
10	Benefit to Rte 3	Percent reduction in vehicle miles of travel (VMT) on Route 3 between I-95 and River Road, when comparing the Alternative to the Baseline Alternative 1 condition.	●	●	●	●	Less than 1.0%	1.1% to 6.0%	6.1% to 10.0%	Greater than 10.0%		

Fredericksburg Area Congestion Relief Study: 2nd Screening Footnotes

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Footnote #	Footnote Heading	Explanation	Range Definition							
			No Negative Impact ●	Low Negative Impact □	Medium Negative Impact ■	High Negative Impact ■	No Positive Impact ●	Low Positive Impact □	Medium Positive Impact ■	High Positive Impact ■
11	Consistency with Local & Regional Plans	Based on an Alt's inclusion in the locality's Comp Plan and/or FAMPO's CLRP.	●	●	●	●	No portion of Alt in locality's current Comprehensive Plan (Needs Element) <i>or</i> FAMPO CLRP	Portion of Alt in locality's current Comprehensive Plan (Needs Element) <i>or</i> FAMPO CLRP	Entire Alt in Locality's Current Comprehensive Plan (Needs Element) <i>or</i> FAMPO CLRP	Entire Alt in Locality's Current Comprehensive Plan (Needs Element) & FAMPO CLRP
12	Federal Approval for Interstate Access (FHWA)	Anticipated difficulty of reaching FHWA approval based on stated federal policy and past VDOT experience in similar situations across Virginia.	No FHWA Approval or Minimal FHWA Coordination or Approval	IMR required	Full new IJR required (some previous vetting)	Full new IJR required (no previous vetting)	No FHWA Approval or Minimal FHWA Coordination or Approval	●	FHWA IJR Approval for Similar Alt in Hand	FHWA IJR Approval in Hand
13	Ease of Federal Approval (Env. Permits)	Environmental permits likely needed include wetland and water quality permits. The Corps of Engineers, when issuing their wetland and water impact permits, must take into consideration impacts to protected species and historic properties. In addition, the Corps is obligated to permit only the Least Environmentally Damaging and Practicable Alternative (LEDPA).	No Permits Necessary	Env. Impacts Low	Env. Impacts Moderate	Env. Impacts High	●	●	●	●
14	NPS Park Lands	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Based on acreage within lands administered by the National Park Service (NPS). If federal funding is used, this becomes a Section 4(f) issue in which avoidance alternatives must be considered. It must be demonstrated that there is no prudent and feasible alternative to the use of the NPS lands in order to use NPS lands as a part of this alternative.	No NPS Lands within Corridor	0.1 to 0.5 Acre	0.6 to 1 Acre	1.1 Acres and Up	●	●	●	●

Fredericksburg Area Congestion Relief Study: 2nd Screening Footnotes

The categories chosen for the 1st Screening are those most often found to be challenging during project development. The human and natural resources identified have particularly protective regulations and equally as strong public sentiments regarding public perceptions of impacts. Additional criteria such as more detailed traffic, relocations, and wetlands are evaluated in the 2nd Screening.

Footnote #	Footnote Heading	Explanation	Range Definition							
			No Negative Impact ●	Low Negative Impact □	Medium Negative Impact ■	High Negative Impact ■	No Positive Impact ●	Low Positive Impact □	Medium Positive Impact ■	High Positive Impact ■
15	Civil War Battlefields	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Degree of impact is based on acreage within Civil War Battlefields. These battlefield boundaries were determined by the Dept. of Historic Resources (DHR) as being potentially eligible for the National Register of Historic Places (NRHP). If federal funds are used, this becomes a Section 4(f) issue, as noted in the footnote #5, and avoidance alternatives must be considered. In addition, these battlefield areas are protected under Section 106 of the National Historic Preservation Act. As such, any federal action, be it federal funding for construction or the issuance of a federal water quality permit from the Corps of Engineers, must take into consideration impacts to these resources.	No Known, Potentially Eligible, Civil War Battlefields within Corridor	0.1 to 25 Acres	25.1 to 50 Acres	50.1 Acres and Up	●	●	●	●
16	Lands with Conservation Easements	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Degree of impact based on acreage within Conservation Easements from the Dept. of Conservation & Recreation (DCR), the Virginia Outdoor Foundation (VOF), the City of Fredericksburg, and The Nature Conservancy (TNC). This is a Section 4(f) resource, in addition to being subject to an Open Space Easement managed by the VOF.	No Conservation Lands	0.1 to 20 Acres	20.1 to 40 Acres	40.1 Acres and Up	●	●	●	●
17	Scenic & Recreational Rappahannock / Rapidan Rivers	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Any additional crossing not adjacent to the existing I-95 bridges is considered to have a high negative impact to scenic, recreational, and historic values of the Virginia Designated State Scenic Rappahannock River.	No new river crossings	New river crossing adjacent to existing I-95 bridges	●	New river crossing not adjacent to existing I-95 bridges	●	●	●	●
18	Protected Species	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Any corridor with known locations of state or federally protected species receives a high negative impact	No protected species	●	●	Any protected species present	●	●	●	●

Fredericksburg Area Congestion Relief Study: 2nd Screening Footnotes

The categories chosen for the 1st Screening are those most often found to be challenging during project development. The human and natural resources identified have particularly protective regulations and equally as strong public sentiments regarding public perceptions of impacts. Additional criteria such as more detailed traffic, relocations, and wetlands are evaluated in the 2nd Screening.

Footnote #	Footnote Heading	Explanation	Range Definition							
			No Negative Impact ●	Low Negative Impact □	Medium Negative Impact ■	High Negative Impact ■	No Positive Impact ●	Low Positive Impact □	Medium Positive Impact ■	High Positive Impact ■
19	Wetlands	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Includes all wetland types (forested, scrub-shrub, emergent, etc.).	No Wetlands	0.1 to 10 acres	10.1 to 20	20.1 & up	●	●	●	●
20	Relocations (Residential & Business)	Based on a 500-foot wide planning corridor of each alternative. Actual right of way would be closer to 220 feet. The wider analysis area allows for flexibility to avoid and minimize potential impacts during design. Actual impacts would be much less than those identified within the 500-foot wide corridor. Based on number of structures within 500' wide corridor of each alternative.	No Residential or Commercial Relocations	1 to 49 Structures	50 to 99 Structures	100 & Up Structures	●	●	●	●

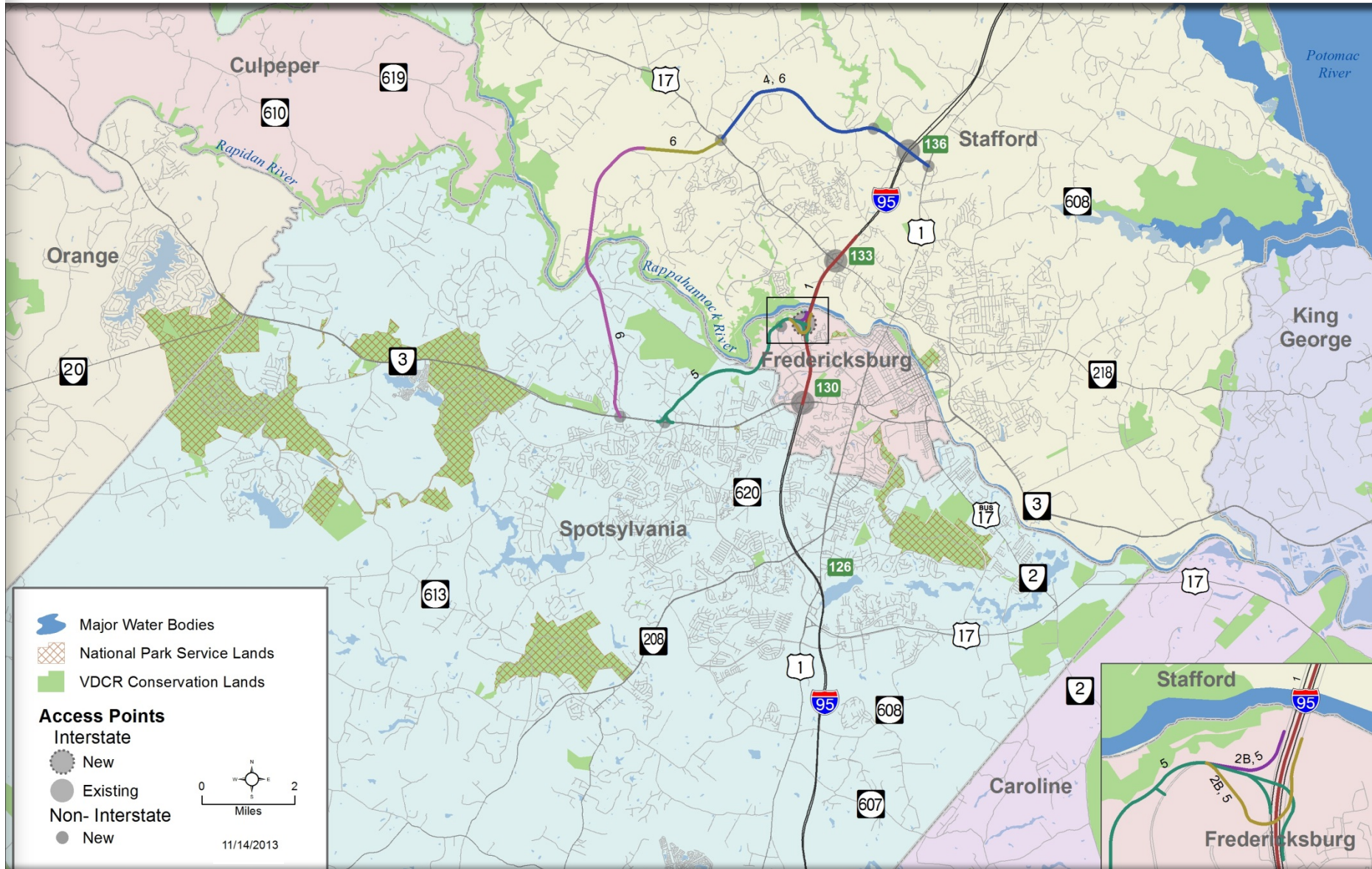
Fredericksburg Area Congestion Relief Study: 2nd Screening Results

Alt. # ¹	Length in Miles ²	2019 Planning Level Cost \$Millions ³	Traffic Impacts							Policy Considerations			Environmental Impacts						
			Average Daily Traffic (ADT) Served by Alt ⁴	Ratio of ADT to Cost ⁵	Benefit to Regional Vehicle Hours of Delay (VHD) ⁶	Travel Time Savings ⁷	Benefit to I-95 ⁸	Benefit to US 17 ⁹	Benefit to Rte 3 ¹⁰	Consistency with Local & Regional Plans ¹¹	Federal Approval for Interstate Access (FHWA) ¹²	Federal Approval (Env. Permits) ¹³	NPS Park Land ¹⁴	Civil War Battlefields ¹⁵	Conservation Easements ¹⁶	Scenic & Recreational Rappahannock & Rapidan Rivers ¹⁷	Protected Species ¹⁸	Wetlands ¹⁹	Relocations Residential & Business ²⁰
Alt 5	5.8	\$284	■	■	□	■	□	□	●	■	■	□	●	●	□	●	●	□	■
Alt 5B	10.9	\$519	■	■	□	■	□	□	□	■	■	□	●	●	□	●	●	□	■
Alt 6	13.5	\$562	■	■	■	■	■	■	■	■	■	■	●	●	■	■	■	■	■
Alt 2B	1.5	\$37	■	■	●	●	●	●	●	□	■	□	●	●	●	●	●	□	●

Legend

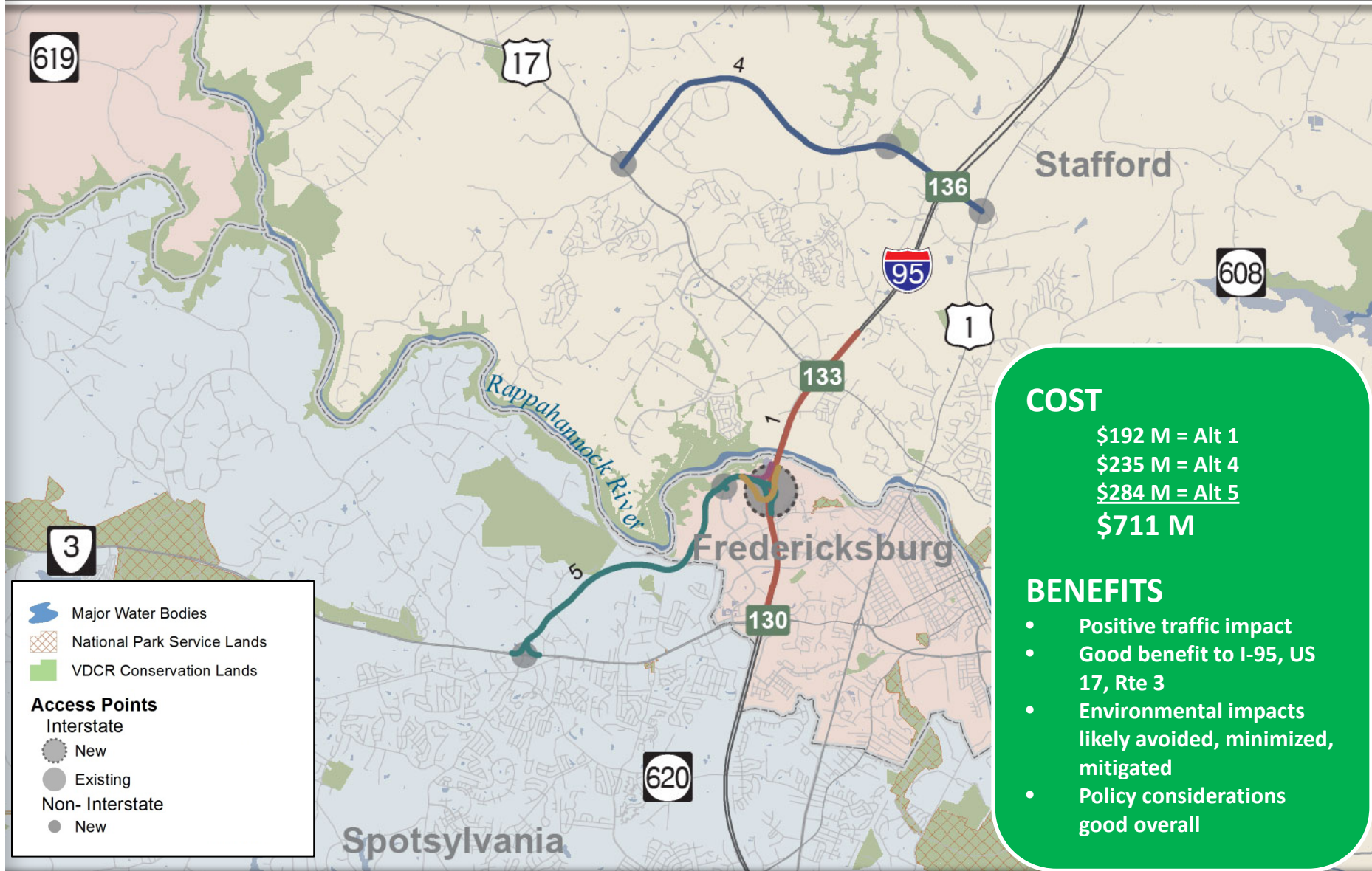
Negative Impacts		Positive Impacts	
●	Neutral / Minimal / No Negative Impact or Resistance	●	Neutral / Minimal / No Positive Impact
□	Low Negative Impact or Resistance	□	Low Positive Impact
■	Medium Negative Impact or Resistance	■	Medium Positive Impact
■	High Negative Impact or Resistance	■	High Positive Impact

2nd Screening Results



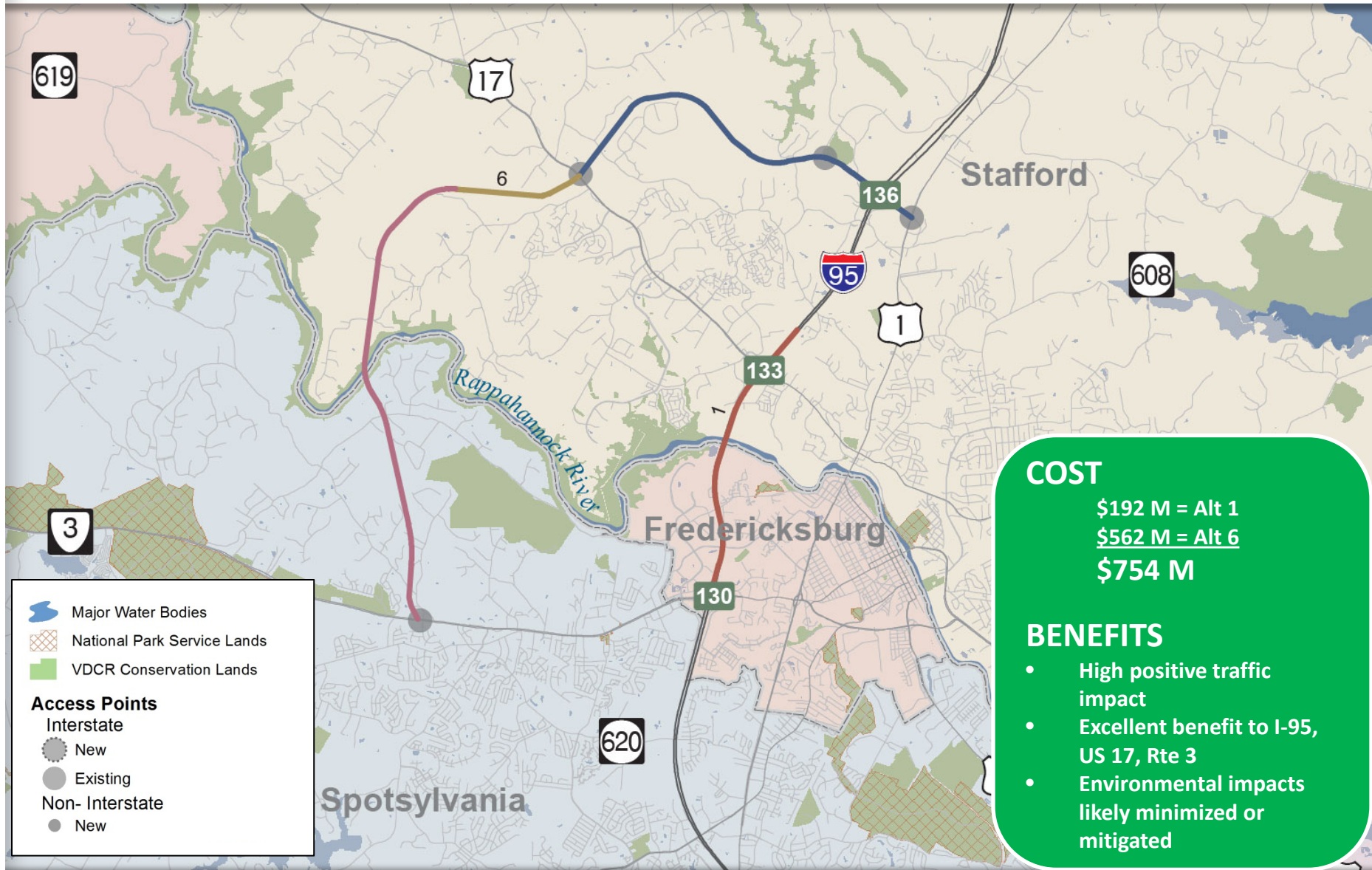
Recommendation #1

Alts 1, 4, and 5



Recommendation #2

Alts 1 and 6



Recommendation #3

Alts 1 and 2B

COST

\$192 M = Alt 1

\$ 37 M = Alt 2B

\$229 M

BENEFITS

- Ratio of average daily traffic volume to cost is very positive
- Environmental impacts likely avoided, minimized, or mitigated
- Cost is in the low range



Next Steps

- **VDOT seeks MPO endorsement**
- **Determination of future phases of study for conceptual alternatives**
- **CTB to consider the project(s) for inclusion in the prioritization process for the Six Year Improvement Program**
- **A Transit Component will be included as part of any and all recommendations**

