



FREDERICKSBURG DISTRICT
STAKEHOLDER GROUP – PHASE 2
ROUTE 3 AND ROUTE 1
SPOTSYLVANIA / FREDERICKSBURG

April 12, 2022





Agenda



Falmouth

Route 1 Study
City of Fredericksburg
Spotsylvania County
From: Idlewild Blvd

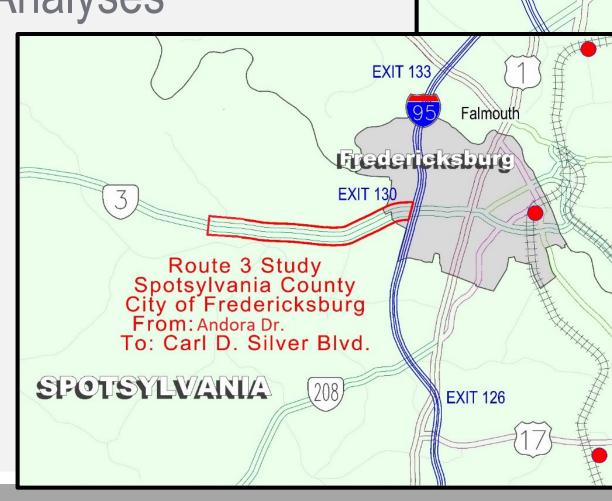
To: Lassen Lane

IT 126

Fredericksburg

EXIT 130

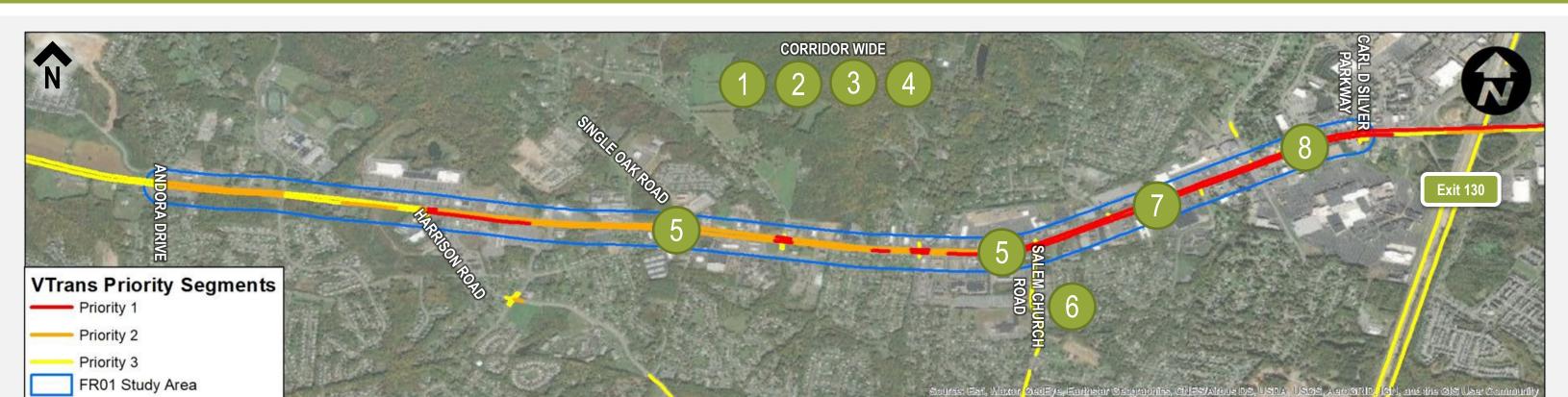
- Pipeline Phase 2 Updates
- MetroQuest Summary
- SMART SCALE Application Discussion
- Refined Alternative Investigation Progress
 - Detailed Operations and Safety Analyses
 - Concept Graphics
 - Cost Estimates
- Next Steps and Schedule
 - SMART SCALE Applications
 - Report and Documentation
 - Phase 3





Phase 1 Recap | FR01

Route 3 from Andora Drive to Carl D Silver Parkway







Significant rear end and sideswipe collisions due to congestion.



Limited and disconnected sidewalk throughout the study area.



Over 80,000 vehicles per day leads to significant congestion during AM and PM peak hours.



High number of direct access points to Route 3.

No.	Proposed Alternatives	VTrans Needs Addressed
1	Corridor-wide thru-cut treatment	Congestion Mitigation, Capacity Preservation, and Safety Improvement
2	Corridor-wide RCUT treatment	Congestion Mitigation, Capacity Preservation, and Safety Improvement
3	Alternative intersections at Single Oak Road / Chancellors Village Lane and Chancellor Center Shopping Mall	Congestion Mitigation, Capacity Preservation, and Safety Improvement
4	Corridor-wide pedestrian improvements	Pedestrian Access, Pedestrian Safety
5	Low-cost safety treatments	Safety Improvement
6	Speed reduction east of Salem Church Road	Safety Improvement
7	Grade separation from Bragg Road to Carl D Silver Parkway	Congestion Mitigation, Capacity Preservation, Pedestrian Access and Safety Improvement
8	Corridor-wide transit improvements	Transit Access





MetroQuest Survey Results | FR01

Route 3 from Andora Drive to Carl D Silver Parkway

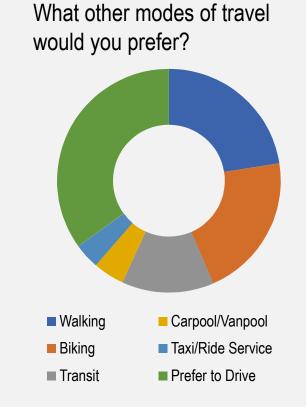






How do you normally travel in this area? Public Transit Walking

Carpool/Shared Ride



KEY TAKEAWAYS

- Respondents were generally neutral or in favor of the thru-cuts corridor wide.
- Respondents were in favor of the two grade-separated options presented on the east end of the corridor, with preference for the WB left-turn flyover at Carl D Silver.
- Respondents were strongly in favor of the multimodal improvements.
 - Respondents ranked Carl D Silver Parkway, Mall Drive/Central Park Boulevard, and Andora Drive as the 3 highest-priority intersections for pedestrian improvements.
 - 22 comments were in favor of pedestrian facilities, and 12 comments were not in favor of adding pedestrian facilities.

PUBLIC COMMENTS

- "Definitely needs to be more sidewalks around here! I especially like the idea to connect the VCR trail with more access sidewalks."
- "People do not need to be walking across Rte. 3or even parallel to 3. We need to focus on congestion and cutting down on the amount of traffic lights that act as stop lights."
- "I would LOVE LOVE to see any sort of split grade intersections or local/express lanes on this road."



■ Biking

Driving Personal Vehicle

(P)

Thru-Cut Intersection Treatment: Example at Route 3 / Salem Church Road / Chamber Drive



Project Definition

- Corridor treatment of Thru-Cuts.
- Example shown at Salem Church Road
- Restrict side street thru-movements.
 - Redundancy in the street network and U-turns can be accommodated at existing signalized intersections.

Benefits

- Removes signal phases at intersection.
- Better accommodates pedestrian signal phases than a traditional signal.
- Provides 9% crash reduction based on SMART SCALE scoring CMF proxies.

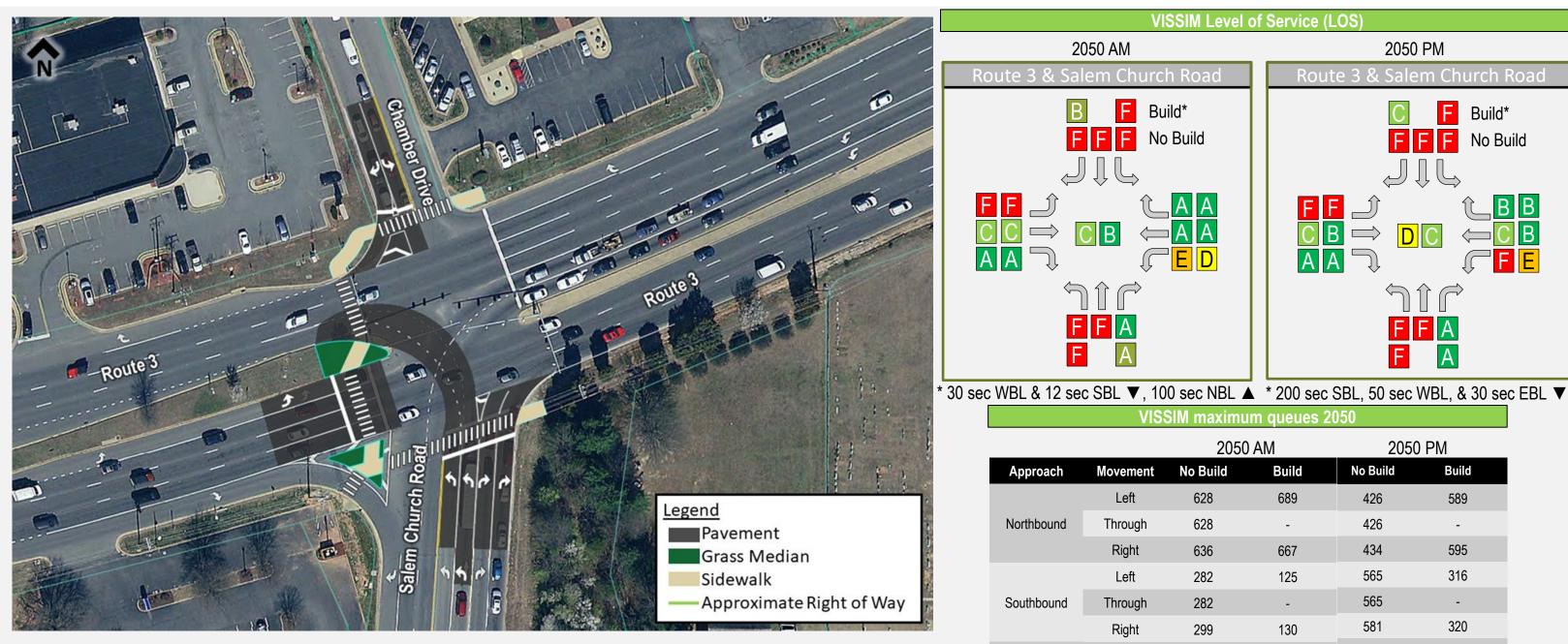
Cost

- \$1,000,000 \$2,000,000 planning level estimate.
- Range for Thru-cut treatments along the corridor depending on constraints at each intersection location.



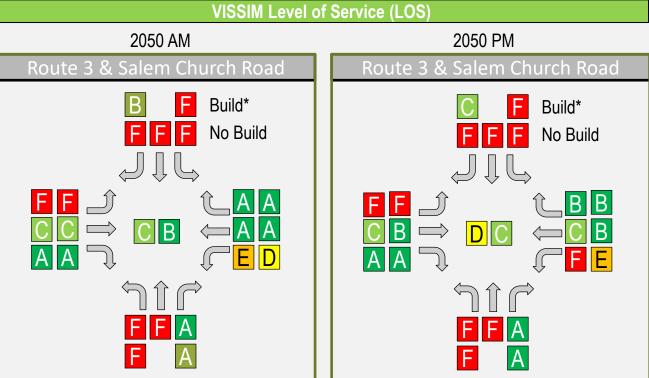








Build additionally includes pedestrian signal phases and thru-cut configuration. Note: modeled a single NBL to evaluate avoiding median impact. Dual NBL is feasible and would alleviate AM delay increase



VISSIM maximum queues 2050

		2050 AM		205	0 PM
Approach	Movement	No Build	Build	No Build	Build
	Left	628	689	426	589
Northbound	Through	628	-	426	-
	Right	636	667	434	595
	Left	282	125	565	316
Southbound	Through	282	-	565	-
	Right	299	130	581	320
	Left	835	808	755	680
Eastbound	Through	835	808	755	680
	Right	814	803	716	675
	Left	447	404	1404	1188
Westbound	Through	447	404	1404	1188
	Right	463	177	1431	1211



Thru-Cut Intersection Treatment: Example at Route 3 / Salem Church Road / Chamber Drive



• Intersection Crashes (2015-2019)

	K	Α	В	С	0	Total
Total Crashes	0	2	9	1	26	38

CMFs

	Applicable Crash Type	KABC	0
Signal Retiming/Optimization	All	0.91	0.91

Expected Crash Reduction (based on 5-year history)

Improvement Location	K	Α	В	С	0	Total
Salem Church Road*	0	0.18	0.81	0.09	2.34	3.42

K. Fatal, A. Severe Injury, B. Visible Injury,

C. Nonvisible Injury, O. Property Damage Only

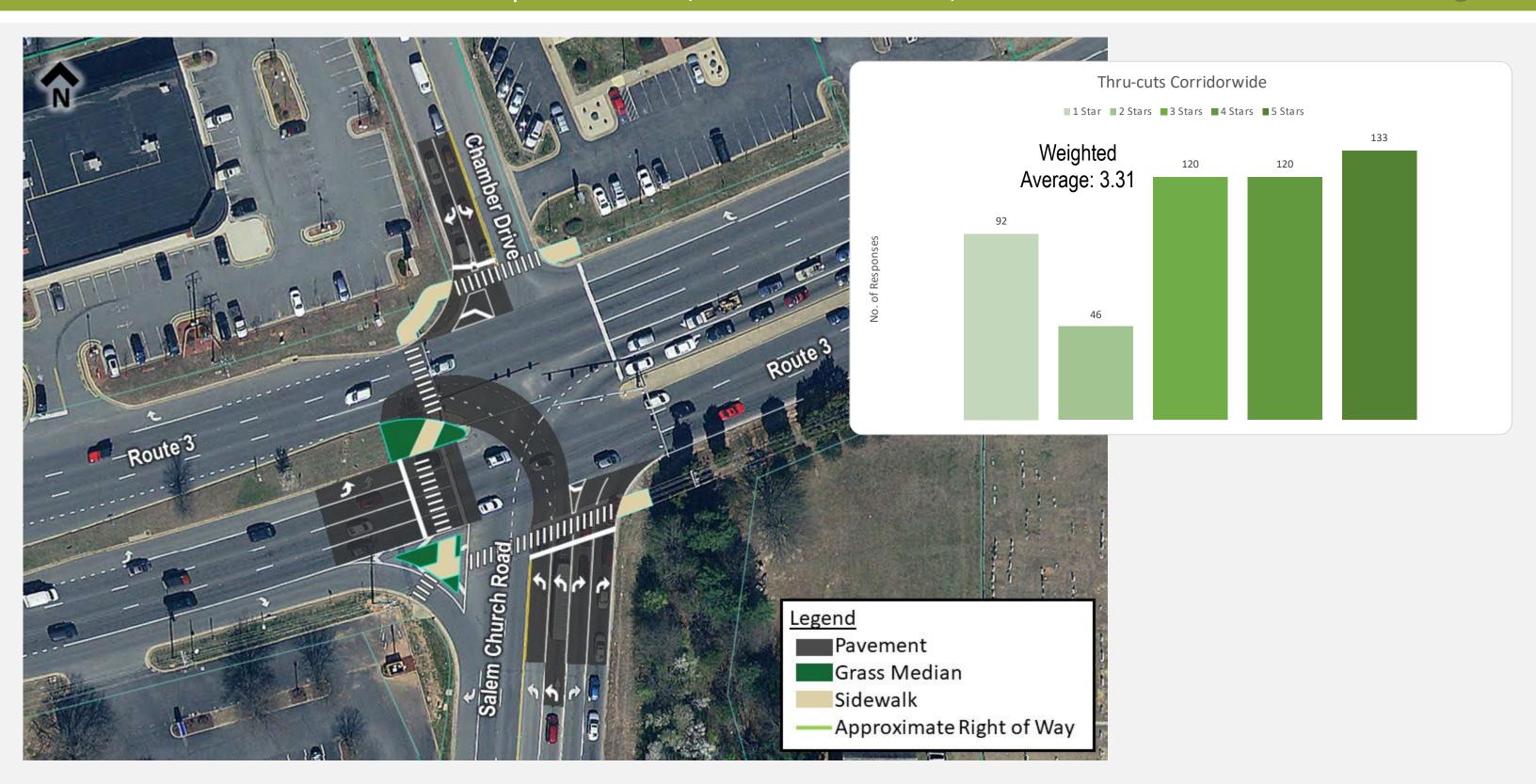
*Expected crash reduction is based on Salem Church Road as an example, but all thru-cuts corridor wide are anticipated to experience a 9% reduction in crashes.







Thru-Cut Intersection Treatment: Example at Route 3 / Salem Church Road / Chamber Drive









Alternatives Comparison – 6-lane Widening vs Thru-Cut Treatments west of Harrison Road

Intersection Delay (LOS)

Scenario	AM Peak	MID Peak	PM Peak			
Route 3 / Andora Drive / Corter Avenue						
No Build 2050	78 (E)	43 (D)	65 (E)			
Thru-Cut, 4 Lanes	52 (D)	31 (C)	40 (D)			
Signal, 6 Lanes	41 (D)	38 (D)	44 (D)			
Thru-Cut, 6 Lanes	43 (D)	31 (C)	32 (C)			
Route 3 / Big Ben /	Spotswood	Furnace				
No Build 2050	127 (F)	37 (D)	102 (F)			
Thru-Cut, 4 Lanes	27 (C)	37 (D)	63 (E)			
Signal, 6 Lanes	45 (D)	19 (B)	28 (C)			
Thru-Cut, 6 Lanes	17 (B)	12 (B)	14 (B)			



Comparison

- VTRANS Needs
 - Congestion mitigation VTRANS need stops east of Harrison Road.
 - Capacity preservation VTRANS need is west of Harrison Road.
 - Typical capacity preservation projects include alternative intersections, reducing signal phases, etc.
- Arterial Preservation Program states "safety, preservation, and enhancement strategies serve as an alternative to widening major highways to add capacity."
- Route 3 arterial management plan calls for widening to 6 lanes west of Harrison Road.

Cost

- Widening between Harrison Road and Andora Drive
 - \$ 12,000,000 \$ 14,000,000
- Thru-Cut treatments
 - \$ 2,000,000 \$ 4,000,000





Westbound Route 3 Flyover to Spotsylvania Towne Center





Project Definition

- Construct westbound left-turn flyover into Spotsylvania Town Center from Route 3.
- Close Mall Court.
- Intersection control at Towne Center Boulevard to be determined.

Benefits

- Relieves congestion for westbound vehicles entering Spotsylvania Towne Centre.
- Reduces signal phasing and congestion at Carl D Silver Parkway.
- Removes left-turning vehicles from Mall Drive intersection.
- Reduces conflict points at Carl D Silver Parkway intersection.

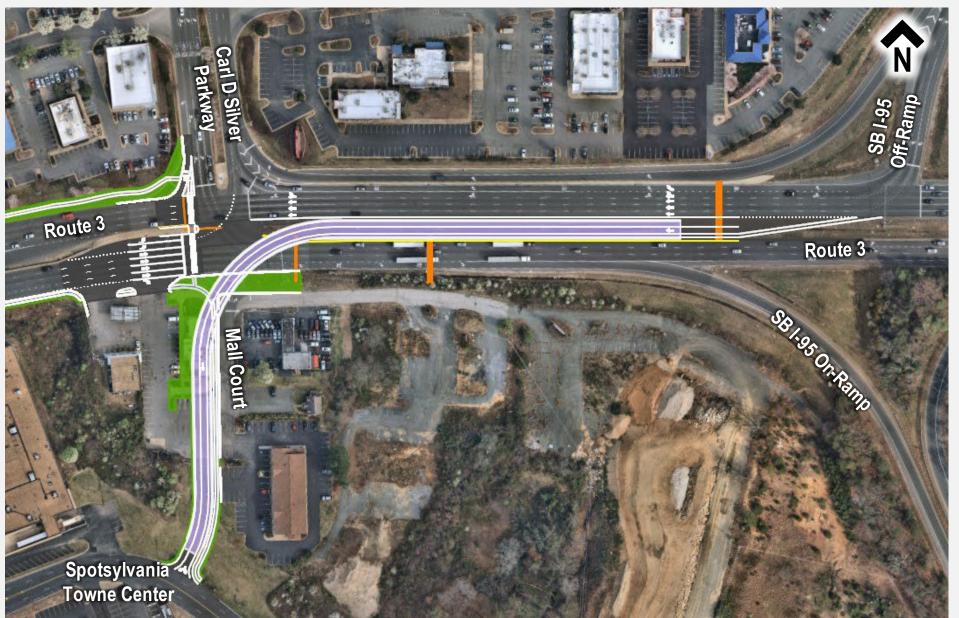
Cost

• \$15,000,000 - \$20,000,000 planning-level cost



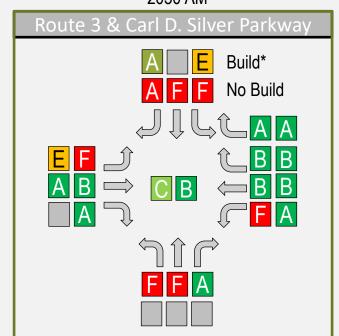


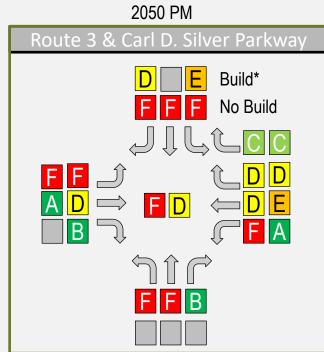
Westbound Route 3 Flyover to Spotsylvania Towne Center



- No Build includes optimized signal timings
- Build additionally includes pedestrian crossing and flyover
 - Design could be refined to provide access to existing land uses on Mall Court







* 11 sec EBL & 12 sec SBL ▼

* 100 sec EBL & 450 sec SB ▼

VISSIM maximum queues 2050

		2050 AM		2050 PM	
Approach	Movement	No Build	Build	No Build	Build
	Left	109	-	129	-
Northbound	Through	109	-	128	-
	Right	109	-	128	-
	Left	365	350	3392	950
Southbound	Through	365	-	3392	-
	Right	364	328	3392	926
	Left	335	492	897	542
Eastbound	Through	805	425	893	444
	Right	0	-	0	-
	Left	121	0	120	0
Westbound	Through	453	488	1069	990
	Right	448	484	1066	987





Westbound Route 3 Flyover to Spotsylvania Towne Center





• Intersection Crashes (2015-2019)

	K	Α	В	С	0	Total
Total Crashes	0	4	82	103	153	342

• CMFs

	Applicable Crash Type	KABC	0
Non-freeway: Replace arterial turns with loops or directional ramps	All	0.65	0.65

Expected Crash Reduction (based on 5-year history)

Improvement Location	K	Α	В	С	0	Total
Carl D Silver Parkway*	0	0.35	16.8	22.75	31.15	71.05

K. Fatal, A. Severe Injury, B. Visible Injury,





C. Nonvisible Injury, O. Property Damage Only

^{*}Only reducing crashes involving the westbound direction.

Westbound Route 3 Flyover to Spotsylvania Towne Center







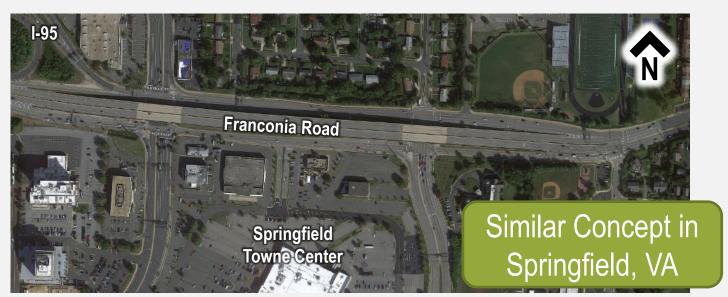






Grade-separated concept between Bragg Road and I-95







 Construct grade-separated concept to separate EB/WB through movements from turning movements between I-95 and Bragg Road.

Benefits

- Provides free-flow conditions for through traffic to/from I-95 to/from beyond Bragg Road.
- Reduces volume through gradeseparated turning movements.
 - Operational and safety benefits with reduced volumes.
- Intersection LOS (No Build/Build)

Intersection	AM Peak	PM Peak
Carl D Silver Pkwy	E/B	F/D
Mall Drive	D/B	F/D
Bragg Road	F/B	F/E

Cost

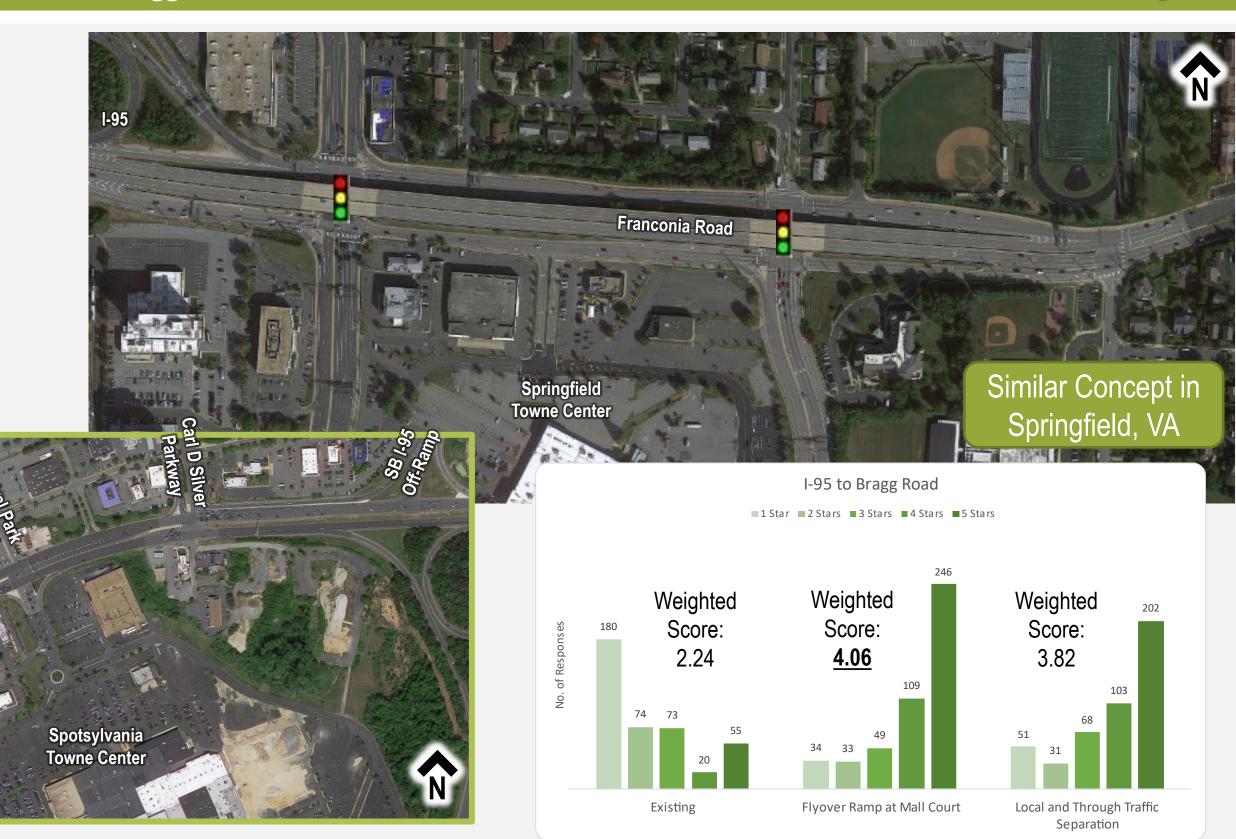
• \$50,000,000 - \$100,000,000 planninglevel cost





2

Grade-separated concept between Bragg Road and I-95

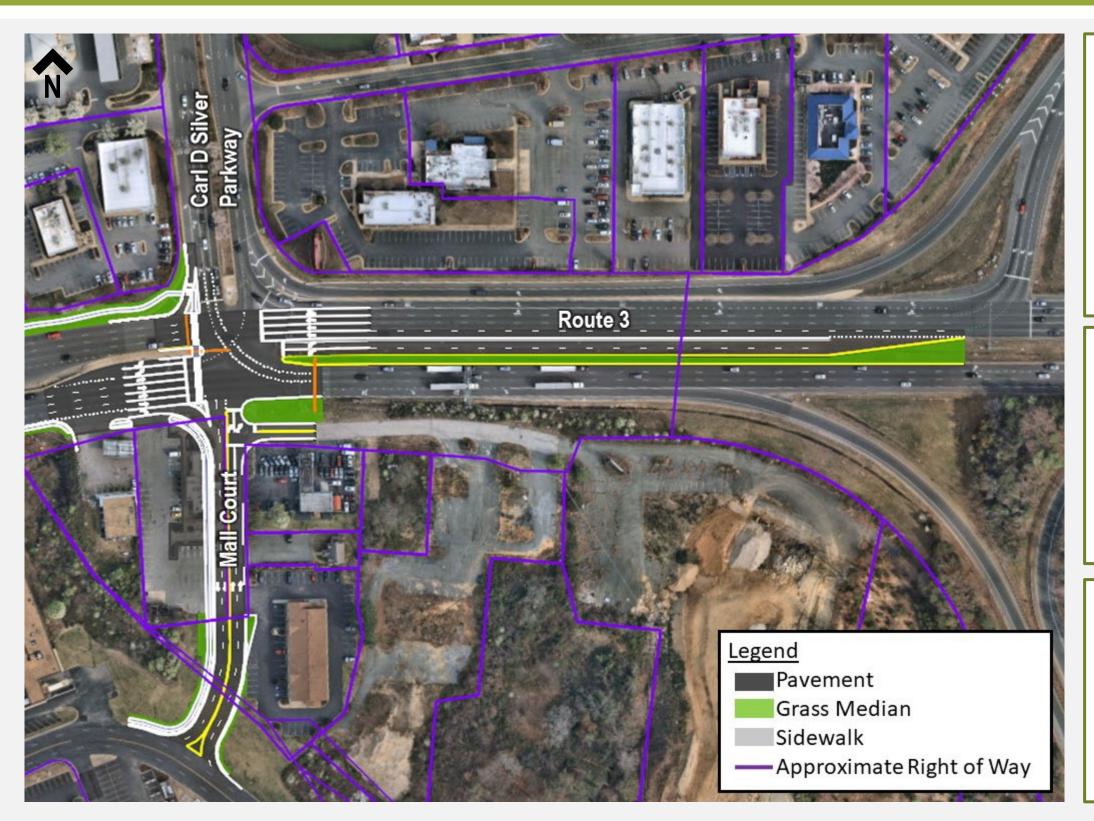






At-grade connection between Carl D Silver Parkway and Towne Centre Boulevard





Project Definition

- Construct at-grade connection between Route 3 and Towne Centre Boulevard at Carl D Silver Parkway.
- NB right-turn only.
- Install dual left-turn lanes for WB approach.
- Control at Towne Centre Boulevard to be determined.

Benefits

- Reduces vehicle delay at Route 3 and Mall Drive.
- Provides direct connection from Central Park to Spotsylvania Towne Center.

Cost

PE	ROW	CN
\$ 250,000	\$ 3,000,000	\$ 5,000,000
TOTAL	\$ 8,250,000	

Costs represented in 2022 dollars.

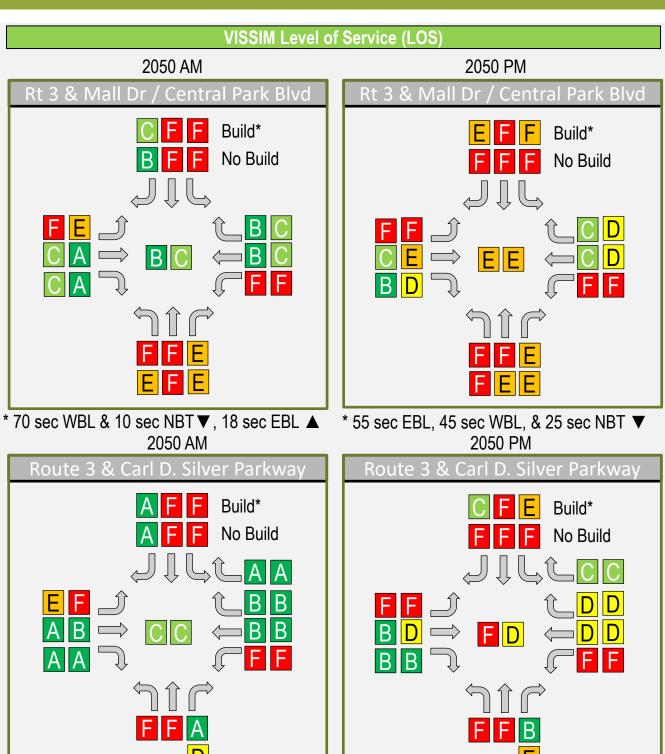




At-grade connection between Carl D Silver Parkway and Towne Centre Boulevard



- No Build includes optimized signal timings
- Build additionally includes pedestrian crossing and at-grade connection to mall
 - Significant delay reduction at both Mall Drive and Carl D Silver Parkway



* 11 sec EBL, 4 sec WBL, & 8 sec SBL ▼

* 100 sec EBL, 40 sec WBL, & 450 sec SBL ▼

At-grade connection between Carl D Silver Parkway and Towne Centre Boulevard



- No Build includes optimized signal timings
- Build additionally includes pedestrian crossing and at-grade connection to mall
 - Significant queue reduction at Mall Drive and Carl D Silver Parkway

VISSIM maximum queues 2050 - Rt 3 / Mall Dr / Central Park Blvd

		2050 AM		2050	PM
Approach	Movement	No Build	Build	No Build	Build
	Left	138	79	741	358
Northbound	Through	136	79	741	358
	Right	202	126	747	358
Southbound	Left	82	106	1213	788
	Through	82	106	1213	788
	Right	146	104	1211	786
	Left	405	550	938	475
Eastbound	Through	737	839	1068	484
	Right	692	2	1050	500
	Left	171	122	602	228
Westbound	Through	339	477	764	765
	Right	340	473	759	765

VISSIM maximum queues 2050 – Rt 3 / Carl D Silver Pkwy / Mall Ct

		2050 AM		2050 AM 2050 PM	
Approach	Movement	No Build	Build	No Build	Build
	Left	109	-	129	-
Northbound	Through	109	-	128	-
	Right	109	133	128	398
	Left	365	352	3392	1255
Southbound	Through	365	352	3392	1255
	Right	364	326	3392	1231
	Left	335	550	897	661
Eastbound	Through	805	839	893	769
	Right	0	2	0	15
	Left	121	122	120	355
Westbound	Through	453	477	1069	932
	Right	448	473	1066	930





Pedestrian Improvements – Corridor Wide





Project Definition

• Install signalized pedestrian accommodations across Route 3 corridor wide (Carl D Silver shown as example).

Benefits

- Provides pedestrian accommodations for pedestrians crossing Route 3 between Andora Drive and Carl D Silver Parkway.
- A 15% reduction in all injury crashes is anticipated at each intersection.

Cost

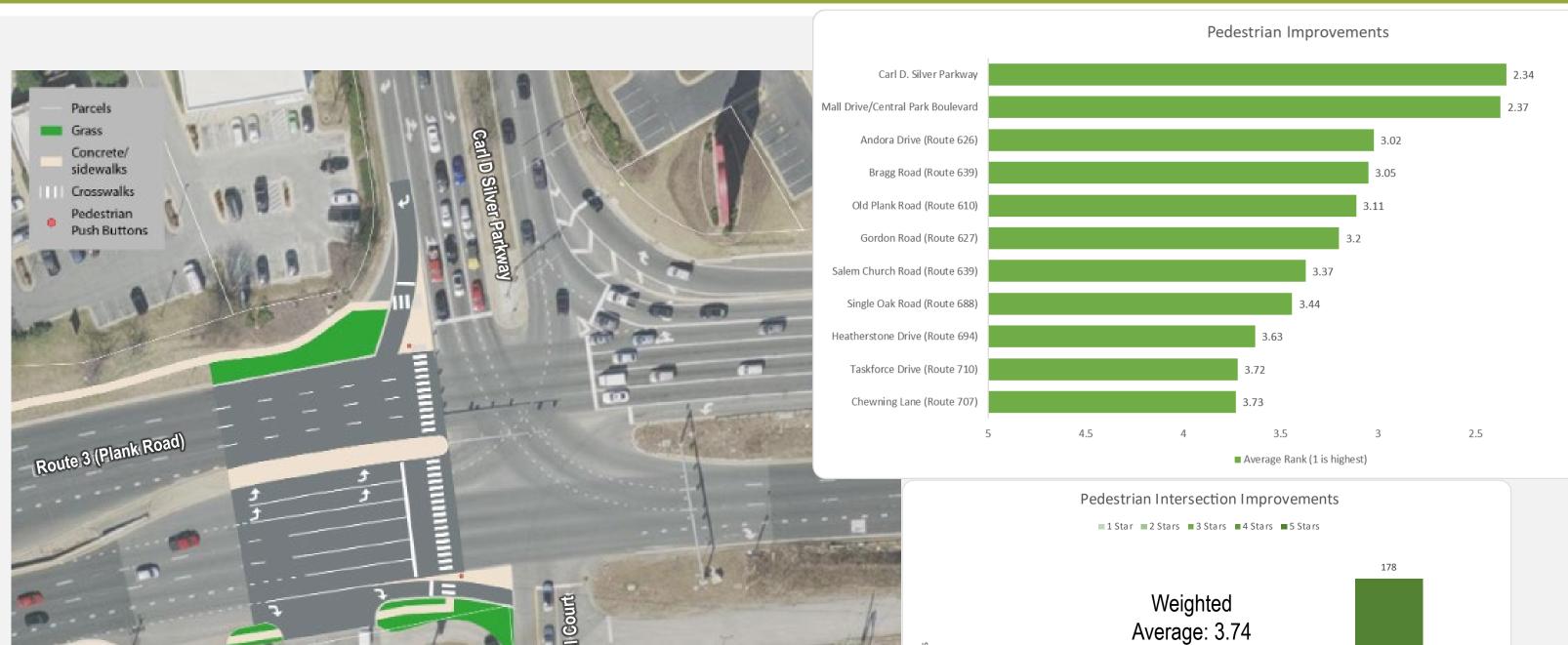
- Costs along the corridor range from \$ 150,000 to \$ 600,000.
- Average cost of \$ 325,000 per intersection.





Pedestrian Improvements – Corridor Wide









Pedestrian Improvements – Corridor Wide





Project Definition

- Install sidewalks along Route 3 to provide complete pedestrian network.
- Can be completed in phases or all at once.

Benefits

- Estimated crash reduction of 88% for vehiclepedestrian related crashes.
- 7 pedestrian crashes
 (visible and severe injury)
 along the corridor in
 locations with no
 sidewalks.
- Potential for reduction of 6.16 pedestrian crashes.

Cost

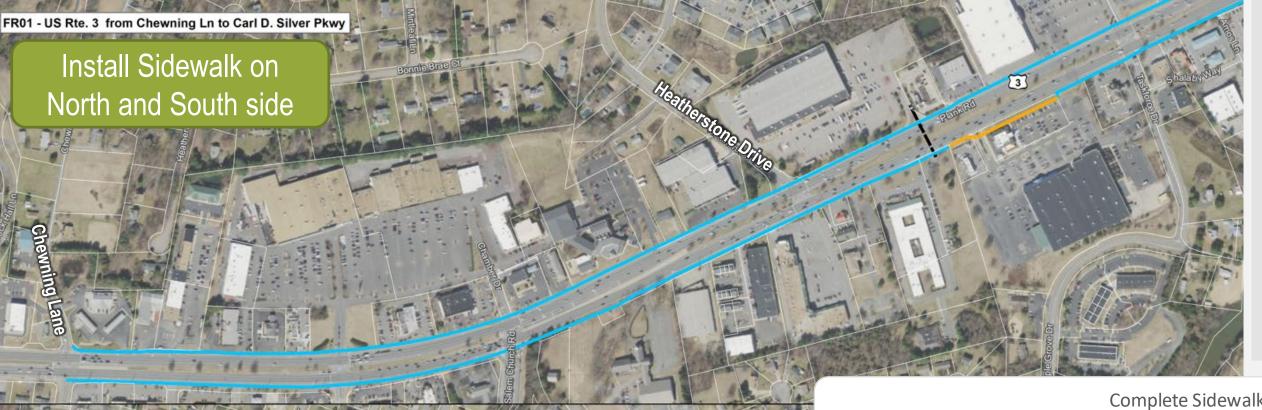
 Costs for sidewalk are estimated at \$ 4,000,000 per mile.





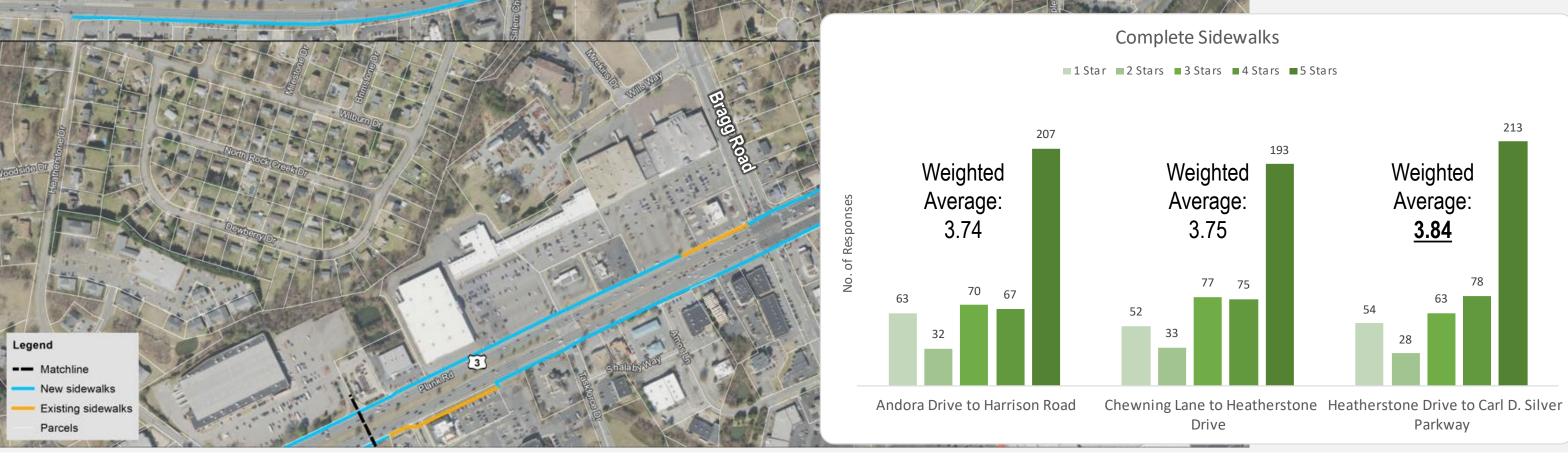
Pedestrian Improvements – Corridor Wide





PUBLIC COMMENTS

- "This is sorely needed. I live in Regency at Chancellorsville and would love to be able to walk or bike to the Harrison Rd shopping"
- "In my opinion there needs to be sidewalks all along Rt 3 to allow for pedestrians and cyclists."
- "People don't walk down rte 3"







Transit Improvements – Corridor Wide





VTrans Needs:

- Very High
 - Transportation Demand Management (RN)
- High
 - Transit Access (to Activity Centers)



Trips through study corridor (2019, pre-pandemic)

- 40% of trips to Activity Centers
- 59% of trips to Equity Emphasis Areas



Identified Benefit Measures for all Transit/TDM recommendations

- Transit Riders Served
- Accessibility
- Bicycle & Pedestrian Access to Transit
- Pedestrian Safety





Transit Improvements – Corridor Wide

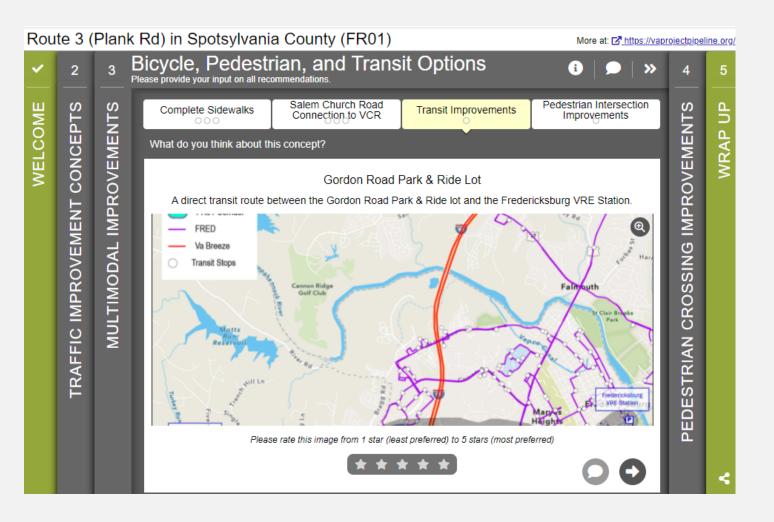
Project Idea	Benefit Measure: Transit Riders Served	Benefit Measure: Accessibility	Benefit Measure: Bicycle and Pedestrian Access to Transit	Benefit Measure: Pedestrian Safety	
		Relevant To Bo	enefit Measure		
rovide ADA loading pads at stops on rights-of-way (ennedy Ln, Taskforce Dr)	x	X		Х	
evelop a pedestrian network along Plank Rd; stablish sidewalk connections between key bus tops and the destinations that they serve	х	X	Х	Х	
dicate the location of bus stops in the field with onsistent signage; consider a route in corridor ith direct service to Fredericksburg VRE Station; ansit development plan for FRED recommends icreasing frequencies of Route F1	×	X			
e-establish service to the Route 3 West/Gordon d Park and Ride lot	X	X			FF
everage the existing GWRideConnect commuter ssistance programs to promote the use of transit, arpool and vanpool, and to provide dematchingand commute options information to	Х	X	X	X	— Va ⊝ Tra







Bicycle, Pedestrian, and Transit Options: Transit Improvements at Gordon Road Park & Ride Lot





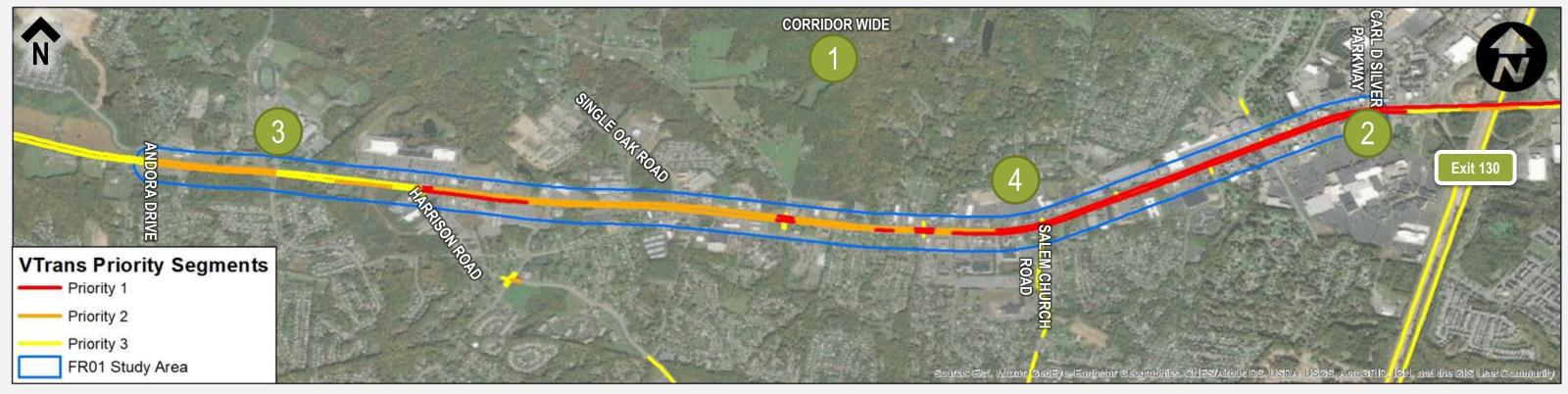




Potential SMART SCALE Applications | FR01

Route 3 from Andora Drive to Carl D Silver Parkway





Issues in the Study Area



Significant rear end and sideswipe collisions due to congestion.



Limited and disconnected sidewalk throughout the study area.



Over 80,000 vehicles per day leads to significant congestion during AM and PM peak hours.



High number of direct access points to Route 3.

No.	Potential SMART SCALE Applications	VTrans Needs Addressed
1	Corridor-wide pedestrian improvements and corridor-wide transit improvements	Pedestrian Access, Pedestrian Safety, Transit Access
2	At-grade connection from Carl D Silver Parkway to Towne Center Boulevard	Congestion Mitigation, Capacity Preservation, Pedestrian Access, and Safety Improvement
3	Improvement alternatives west of Harrison Road	Capacity Preservation
4	Thru-cuts east of Harrison Road	Congestion Mitigation, Capacity Preservation





Phase 1 Recap | FR04

Route 1 from Lassen Lane to Idlewild Boulevard



Issues in the Study Area



Pattern of rear end crashes at intersections throughout the study area.



Limited and disconnected sidewalk throughout the study area.



Travel patterns on the corridor are tied to operations on I-95.

No.	Proposed Alternatives	VTrans Needs Addressed
1	Continuation of the southbound third lane from Harrison Road to Courthouse Road	Congestion Mitigation and Capacity Preservation
2	One-way pair between Harrison Road and Lassen Lane	Capacity Preservation
3	RCUT at Hill Street	Capacity Preservation
4	Low-cost safety treatments	Safety Improvement
5	Corridor-wide pedestrian improvements	Pedestrian Access, Pedestrian Safety
6	City of Fredericksburg Signalized Intersection Evaluation	Congestion Mitigation and Capacity Preservation
7	Corridor-wide transit improvements	Transit Access





MetroQuest Survey Results | FR04

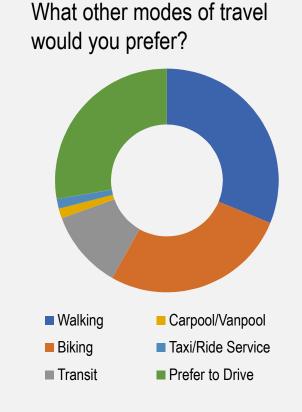
Route 1 from Lassen Lane to Idlewild Boulevard







How do you normally travel in this area? Public Transit Driving Personal Vehicle Biking How do you normally travel in this area? Walking Carpool/Shared Ride



KEY TAKEAWAYS

- · Respondents were generally supportive of the improvements proposed.
- Respondents were strongly in favor of the shared use path and pedestrian crossings at signalized intersections. Although comments provided differing opinions on multimodal improvements.
- Respondents ranked all improvements closely when comparing improvements to each other.

PUBLIC COMMENTS

- "Please consider a "complete street" treatment for Route 1. 2-3 lanes NB and SB with shared-use path and sidewalks on each side along with plenty of trees and shrubs in the median and the sides."
- "Pedestrian improvements are paramount. ADA accessibility & pedestrian improvements can increase transit usage and reduce congestion more than additional roads and lanes for cars."
- "Pedestrian/bicycle improvements are a waste of money and effort. They are not a preferred mode of travel for 99%+ of people in the area. This isn't Field of Dreams where "if you build it, they will come.""



SMART SCALE Applications | FR04



Route 1 from Lassen Lane to Idlewild Boulevard



Issues in the Study Area



Pattern of rear end crashes at intersections throughout the study area.



Limited and disconnected sidewalk throughout the study area.



Travel patterns on the corridor are tied to operations on I-95.

No.	SMART SCALE Pre-Applications	VTrans Needs Addressed		
1	Continuation of the southbound third lane from Harrison Road to Courthouse Road	Congestion Mitigation and Capacity Preservation		
2	Shared use path north of Harrison Road	Pedestrian Access, Pedestrian Safety		
No.	Potential Additional SMART SCALE Improvements	VTrans Needs Addressed		
3	RCUT at Hill Street	Capacity Preservation		





SMART SCALE #1 | FR04

Continuation of 3rd Southbound Lane beyond Harrison Road













Funded RCUT at Industrial Drive as part of Rt 1 / Lafayette Blvd intersection project

Project Definition

- Install 3rd SB lane from Harrison Road to Industrial Drive.
- Convert western frontage road (Loren Drive) to NB only.
- Install sidewalk on west side of Route 1.

Benefits

- Extends 3rd SB lane beyond Harrison Road to better utilize 3rd lane through Harrison Road.
- Anticipated reduction of 1.04 injury crashes based on crash history during the 5-year analysis period.

Cost

PE	ROW	CN
\$ 250,000	\$ 150,000	\$ 5,000,000
TOTAL	\$ 5,400,000	

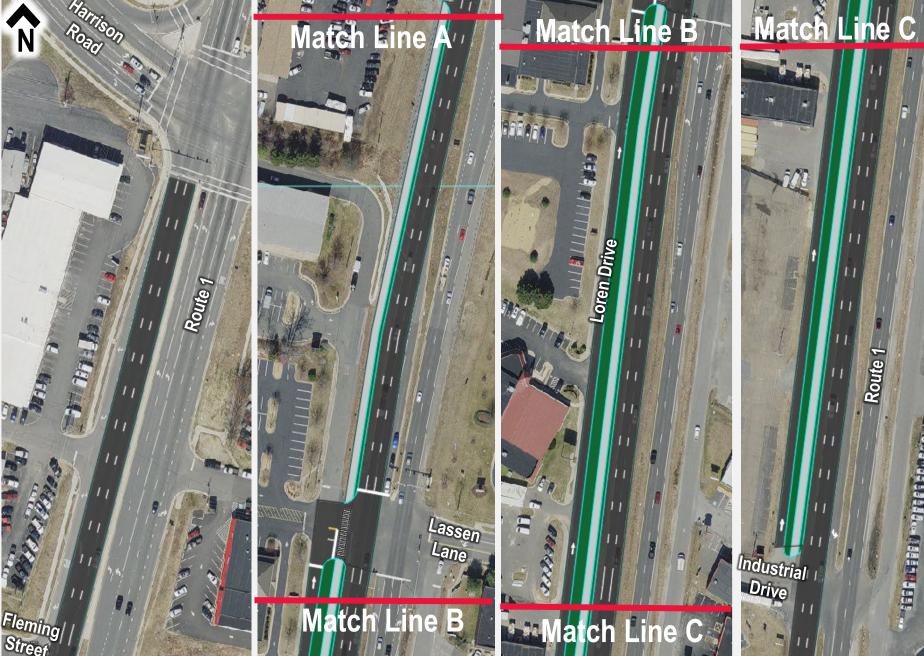
Costs represented in 2022 dollars





SMART SCALE #1 | FR04

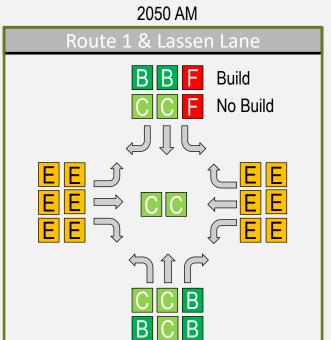
Continuation of 3rd Southbound Lane beyond Harrison Road

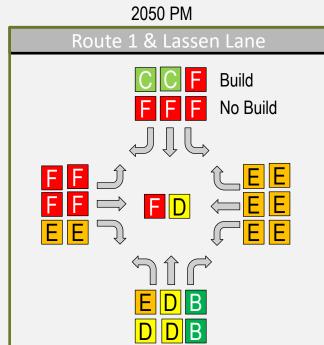


- No Build includes pedestrian crossings
- Build additionally includes 3rd southbound lane









Synchro 95th percentile queues 2050

		2050 AM		2050) PM
Approach	Movement	No Build	Build	No Build	Build
	Left	21	21	13	13
Northbound	Through	#1051	#1051	#1003	#1003
	Right	0	0	0	0
	Left	#283	#283	#243	#242
Southbound	Through	703	383	#1793	892
	Right				
	Left	150	156	#347	#347
Eastbound	Through	156		ποτι	ποτι
	Right	0	0	0	0
	Left	00	00	119	119
Westbound	Through	83	83	119	119
	Right	0	0	21	21



SMART SCALE #1 MetroQuest Results | FR04

Continuation of 3rd Southbound Lane beyond Harrison Road













Funded RCUT at Industrial Drive as part of Rt 1 / Lafayette Blvd intersection project



SMART SCALE #2 MetroQuest Results | FR04

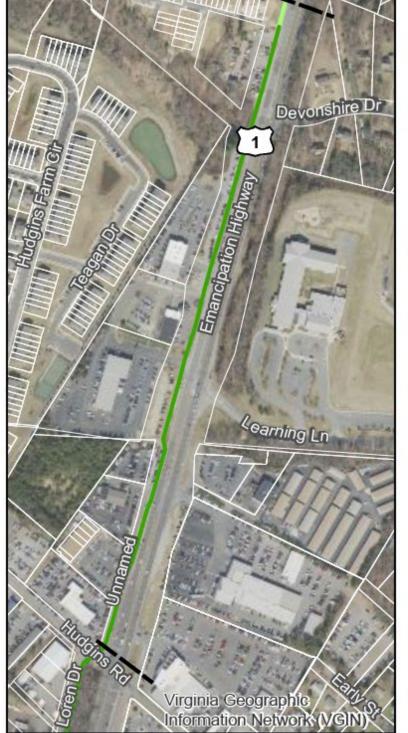
Shared Use Path on West Side of Route 1

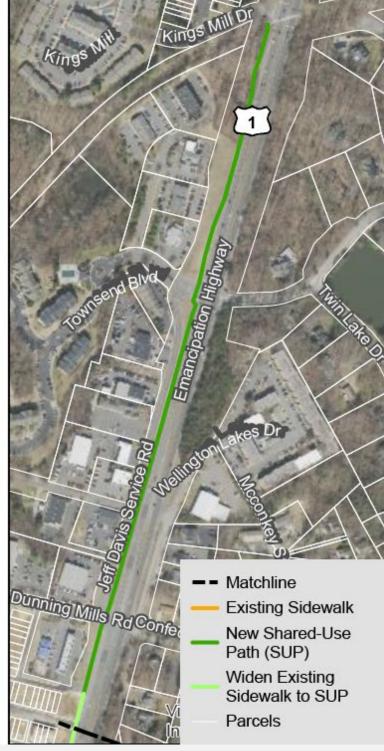


PUBLIC COMMENTS

"I would love to see a path continued all the way to James Monroe High School. If we link learning lane schools to the high school, with existing access to Cowan Blvd and the canal and VCR trails, nearly every student in 22401 would be connected on afoot and bike path to all the schools! There is federal funding through the DOE available to find such a project. Win win for Fredericksburg."







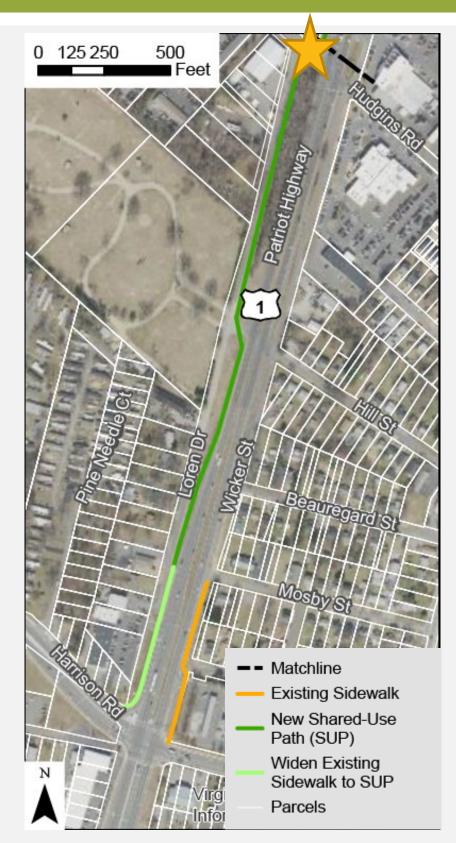




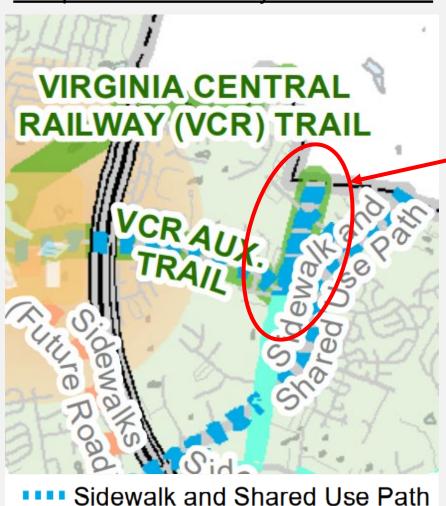
SMART SCALE #2 | FR04

Shared Use Path on West Side of Route 1





County Comprehensive Plan Chapter 3A – Trailways Master Plan



Discussion Points



Northern terminus of shared use path

Project Definition

- Install shared use path on west side of Route 1 north of Harrison.
- Northern terminus to be determined.
 - Current FAMPO application shows Harrison Road to VCR crossing at Kings Mill Drive
- Spotsylvania Comprehensive Plan calls for shared use path between Harrison Road and County/City line.

Benefits

- Provides dedicated space for pedestrians and bicyclists separate from vehicular traffic.
- No pedestrian/bicycle crashes were reported within the 5-year analysis period; however, pedestrian activity was witnessed during field visits.

Cost

- ~\$6 million per mile for PE and CN
- ROW costs to be evaluated





Potential SMART SCALE Improvements | FR04

RCUT Treatment





Project Definition

• Install unsignalized RCUT at Hill Street.

Benefits

• Intersection Crashes (2015-2019)

	K	Α	В	С	0	Total
Total Crashes	0	1	4	0	13	18

CMFs

	Applicable Crash Type	KABC	0
Convert unsignalized intersection to unsignalized RCUT	All	0.37	0.54

• Expected Crash Reduction (based on 5-year history)

	K	Α	В	С	0	Total
Anticipated Crash Reduction	0	0.63	2.52	0	5.98	9.13

K. Fatal , A. Severe Injury, B. Visible Injury,

Cost

• \$1,000,000 for planning-level cost estimate.



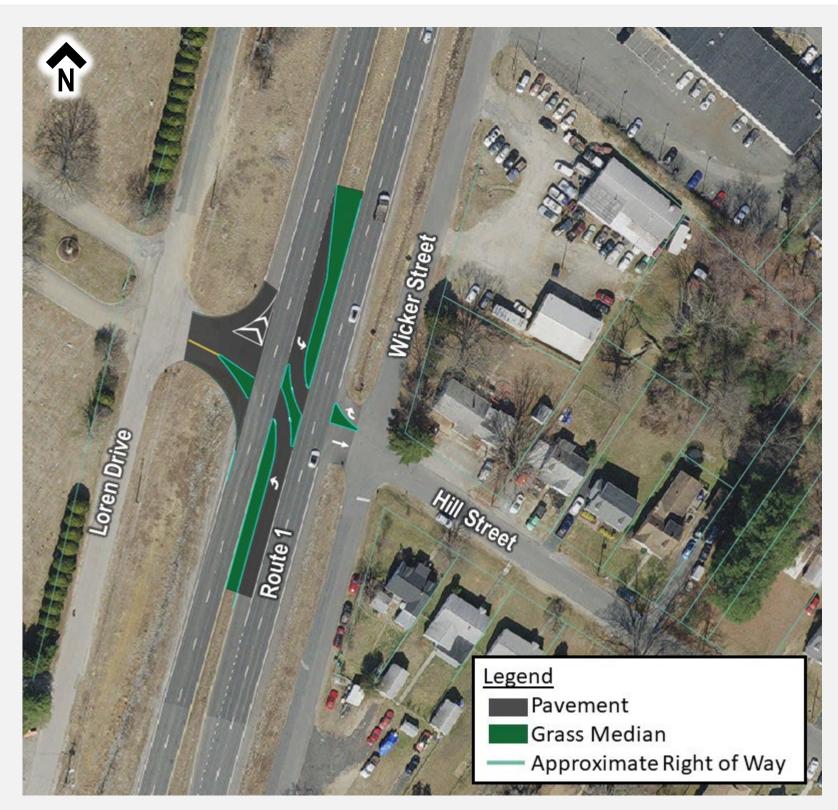


C. Nonvisible Injury, O. Property Damage Only

Potential SMART SCALE Improvements | FR04

RCUT Treatment











Phase 1&2 Improvements | FR04

Corridor-wide transit improvements





VTrans Needs:

- Very High
 - Transportation Demand Management (RN)
- High
 - Transit Access (to Activity Centers)
- Low
 - Transportation Demand Management (COSS)



Trips through study corridor (2019, pre-pandemic)

- 34% of trips to Activity Centers
- 65% of trips to Equity Emphasis Areas



Identified Benefit Measures for all Transit/TDM recommendations

- Transit Riders Served
- Accessibility
- Bicycle & Pedestrian Access to Transit
- Pedestrian Safety





Phase 1&2 Improvements | FR04

2

Corridor-wide transit improvements

Project Idea	Benefit Measure: Transit Riders Served	Benefit Measure: Accessibility	Benefit Measure: Bicycle and Pedestrian Access to Transit	Benefit Measure: Pedestrian Safety
	Relevant To Benefit Measure			
Each stop in corridor needs ADA loading pad connected to a sidewalk	X	X		
Fill in gaps in pedestrian network along US 1, notably between Confederate Blvd and Hood Dr (location of forthcoming VA Hospital); ensure pedestrian connection from Virginia Central Railway Trail to Kings Mill Dr bus stop		X	X	Х
Look at feasibility of connecting Route F2 to VRE, including transferring riders from F2 to VRE from Houser Dr Park and Ride Lot; add bus stop signs at Townsend Sq, Learning, and Loren bus stops; implement SMART SCALE funded service between Route 208 PNR	X	X		
Leverage the existing GWRideConnect commuter assistance programs to promote the use of transit, carpool and vanpool, and to provide ridematching and commute options information to residents, employers, and employees.	X	X	X	X



NEXT STEPS



Solutions

- Confirm preferred alternative(s)
- Report and Documentation
- Finalize Phase 3 scope for final refinement for Smart Scale
- Develop cost estimate with risks and contingencies
- Identify alternative Investment Strategies
- Meet August 1st SMART SCALE deadline

Website: vaprojectpipeline.org

Investment strategy cost estimation and refinement

Finalize multimodal investment strategy/deliverables

Dashboards, field review - high level to harrow then detailed refinement

High level concepts, technical approach no politics

Narrow to best options then more detailed refinement

Methods

Final refinement, address risks and finalize estimates

Phase 3

