PHASE I - DIAGNOSIS AND PROBLEM IDENTIFICATION

TEAM 1 - TRAFFIC OPERATION, PEDESTRIAN AND BICYCLE ACCESSIBILITY NEEDS

Frequent Bicycle and Pedestrian Use

Lack of ADA-Compliant Pedestrian Ramps

Richmond Fire Station #17 is located along US 60 within the study area.

VTRANS Needs

Very High Priority	Safety Improvement, Bicyle Access, Transit Access, TDM
High Priority	-
Medium Priority	-
Low Priority	-

Study Purpose, Goals, and Objectives

Address vehicular, bicycle, and pedestrian safety concerns; address bicycle access needs; address transit and travel demand management needs.

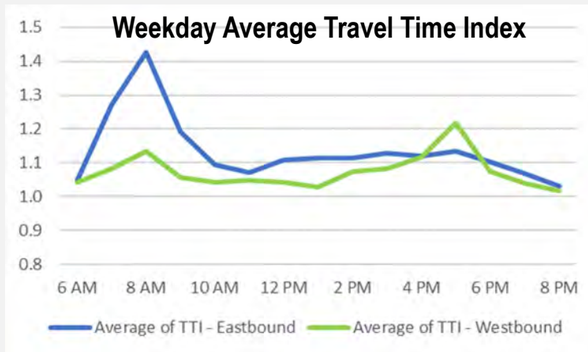
Project aims to identify medium- and long- term solutions for vehicles, bicycles, and pedestrians using crash mitigation and access management strategies.

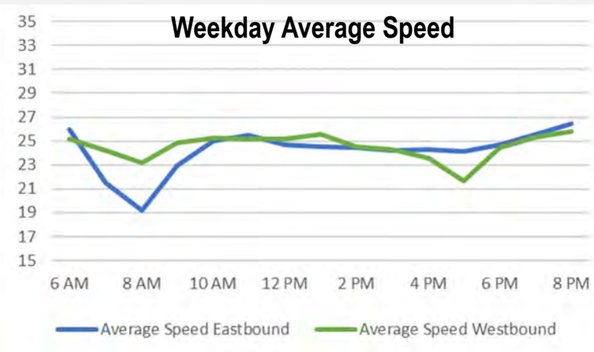
Existing Issues

There are opportunities for additional enhancements to bicycle and pedestrian safety throughout the corridor.

- Existing condition simulations indicate that overall, all the signalized intersections operate at LOS D or better during both peak hours.

- The worst-performing movement at the simulated unsignalized intersections operate at LOS E or F during at least one peak hour. The worst performing movement for all these intersections is from a side street.





PHASE I - DIAGNOSIS AND PROBLEM IDENTIFICATION

TEAM 2 - TRAFFIC SAFETY AND RELIABILITY NEEDS

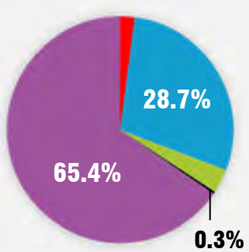
COLLISION TYPE (2015-2019)

LEGEND:

- Rear-end Crashes
- Angle Crashes
- Sideswipe
- Ped/Deer
- Head on
- Fixed Object
- Other
- Sideswipe - Op. Dir.
- Non-collision
- Number of Crashes

Southside and Northside Entrance Locations

CRASH SEVERITY



- 65.4% PDO
- 28.7% Visible Injury
- 3.5% Nonvisible Injury
- 2.1% Severe Injury
- 0.3% Fatal Injury

Total Crashes : 289	2015	2016	2017	2018	2019
A. Severe Injury	3	0	0	2	1
B. Visible Injury	14	13	21	22	13
C. Nonvisible Injury	4	1	2	0	3
K. Fatal Injury	0	1	0	0	0
PDO. Property Damage Only	29	41	33	38	48
Total	**58**	**79**	**62**	**73**	**63**

- Rear-end (131) and Angle (80) crashes are primary crash types.
- Based on crash diagrams, the shared left-thru lanes along US 60 are a contributing factor to the Rear-end crashes.
- Most probable cause for crashes (in general): Following too close
- The reported fatal crash involved a pedestrian and occurred on EB US 60, west of Cowardin Avenue . It was a hit and run and the driver was reported to be drunk.

- There are 54 closely spaced full access entrances along the corridor, which can create safety hazards.

- The data shows the travel time variability is relatively high.

2015-19 POTENTIAL FOR SAFETY IMPROVEMENT

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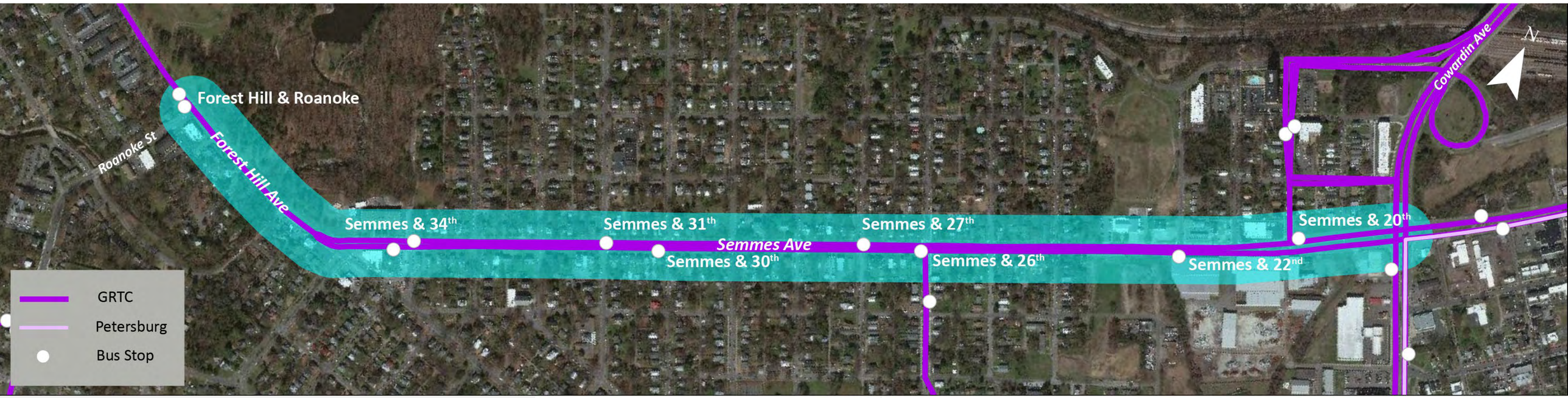
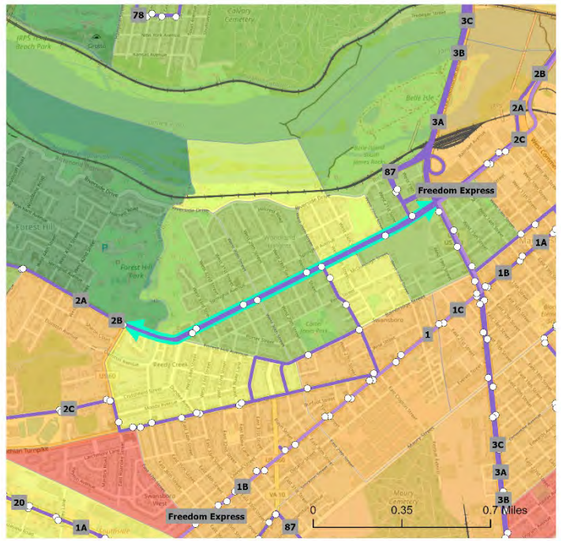
US 60 (Semmes Avenue) from US 60 (W Roanoke Street) to US 1 / US 301 (Cowardin Avenue)



Existing Conditions

	No rail infrastructure in immediate corridor
	RideFinders is the commuter assistance program in region
	No park and rides in area
	Bikeshare and e-scoolers are available elsewhere in the city
	GRTC Routes 2A (60min), 2B (60min), and 2C (30min) [15 min where combined in the study area] 5a-1a; 87 (60min) 530a-12a
	10 stops; all with sidewalk access, some with ADA loading pads; mix of amenities (benches, trash cans)



The All-Day Service Index identifies locations suitable for all-day transit service by combining the results of the Transit-Oriented Population and Non-Work Indices. At both peak and off-peak hours, locations with significant transit-oriented populations are presumed to require connections to and from jobs or non-work-related trip destinations. This results in a propensity index that identifies major origins or destinations for transit trips that would occur throughout the day.

The Peak Index identifies locations suitable for peak-hour service by combining results from the Commuter and Workplace Indices. Locations with significant numbers and densities of commuters are presumed to require connections to and from locations with significant numbers and densities of jobs, especially at peak hours. This results in a propensity index that identifies major origins or destinations for transit trips that would occur during peak hours.

A separate analysis entirely from Transit Propensity. Transit Potential combines population and employment densities for each Census Block Group to indicate the viability of fixed-route service in an area. In general, regions with a density of at least five jobs plus people per acre relatively may be better suited to support fixed-route transit service; areas with densities lower than five jobs plus people per acre may be better suited to support

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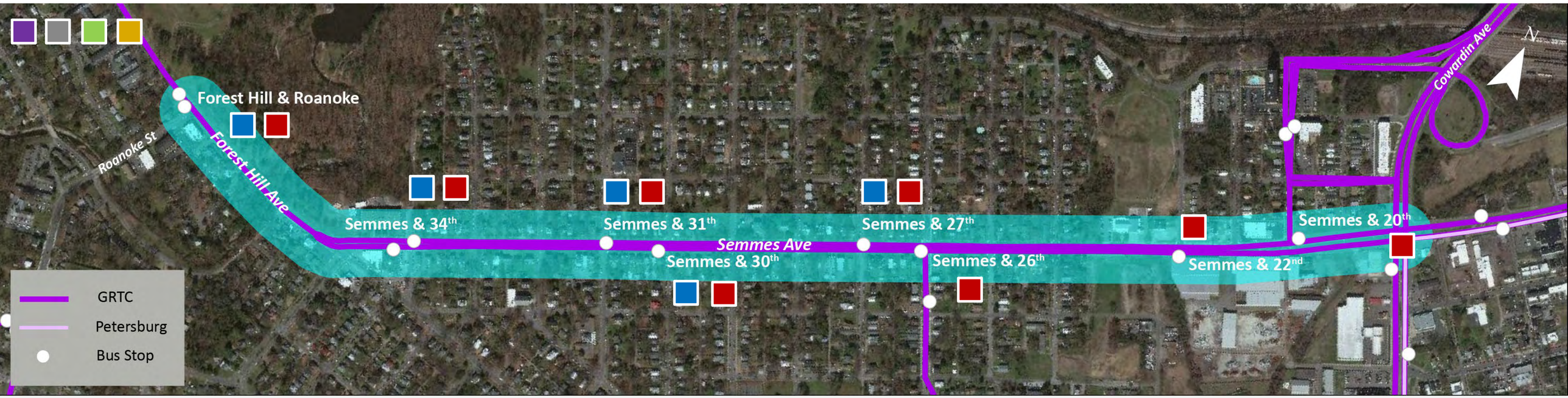

Provide ADA loading pads at stops at Forest Hill Ave & Roanoke Street and at Semmes Ave at 34th (2 stops), 31st, 30th, and 27th

Add striped crosswalks at Forest Hill Ave & Roanoke St and at Semmes Ave at 34th, 31st, 30th, 27th, 22nd, and Cowardin Ave

This corridor is adjacent to a future BRT study area; GRTC is looking at microtransit across the region; and GRTC is expanding bus stop infrastructure across the city – all of these projects will improve transit access in area; GRTC's transit development plan recommends extension of Route 87's hours, expansion of the Routes 2A and 2B's service area, and increase in the 2A and 2B's frequency

A park and ride lot in the area (US 1/US 301 or US 60) might be appropriate, perhaps as part of future BRT infrastructure

Consider expanding bikeshare to the Manchester, Swansboro, and Forest Hill Park areas

Leverage the existing RideFinders 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.