

PHASE I - DIAGNOSIS AND PROBLEM IDENTIFICATION

TEAM 1 - TRAFFIC OPERATION, PEDESTRIAN AND BICYCLE ACCESSIBILITY NEEDS



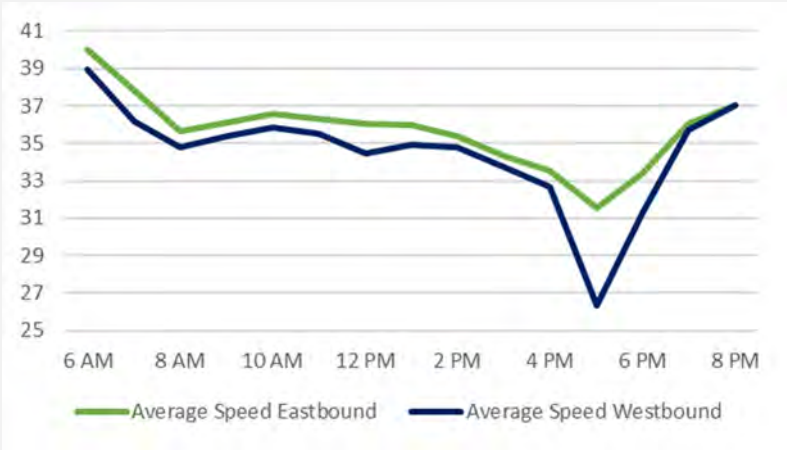
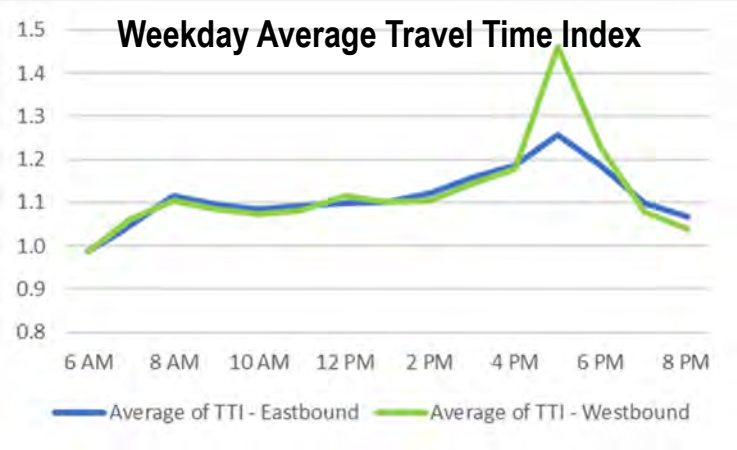
Study Purpose, Goals, and Objectives

Address operational and safety concerns; evaluate congestion mitigation and capacity preservation alternatives to improve multi-modal accessibility

Evaluate up to 3 medium/long term potential improvements using crash mitigation and access management strategies

Existing Issues

- The corridor is lacking adequate transit and bicycle facilities.
- The Route 147 at Robious Road operates at LOS D/E during the AM/PM peak hours.
 - Mainline and side-street approaches congested during the PM peak hour, with at least one failing movement.
 - A train passes through the intersection during the PM peak hour, further exacerbating the congestion.



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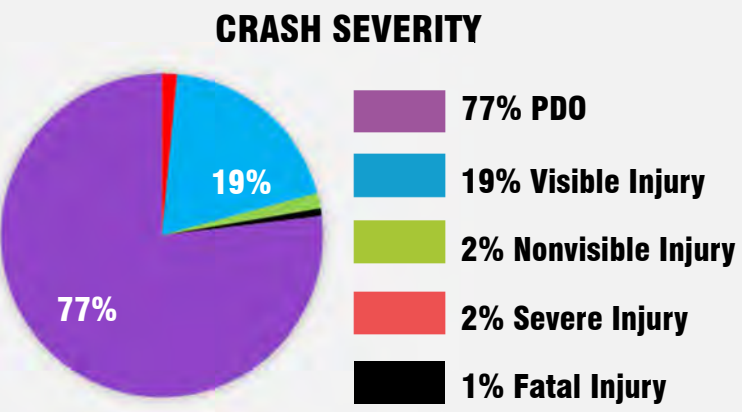
TEAM 2 - TRAFFIC SAFETY AND RELIABILITY NEEDS

COLLISION TYPE (2015-2019)



LEGEND:

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



Total Crashes : 130	2015	2016	2017	2018	2019
A. Severe Injury	0	0	0	2	0
B. Visible Injury	3	4	5	6	7
C. Nonvisible Injury	0	0	2	0	0
K. Fatal Injury	0	0	0	1	0
PDO. Property Damage Only	20	25	19	13	23
Total	23	29	26	22	30

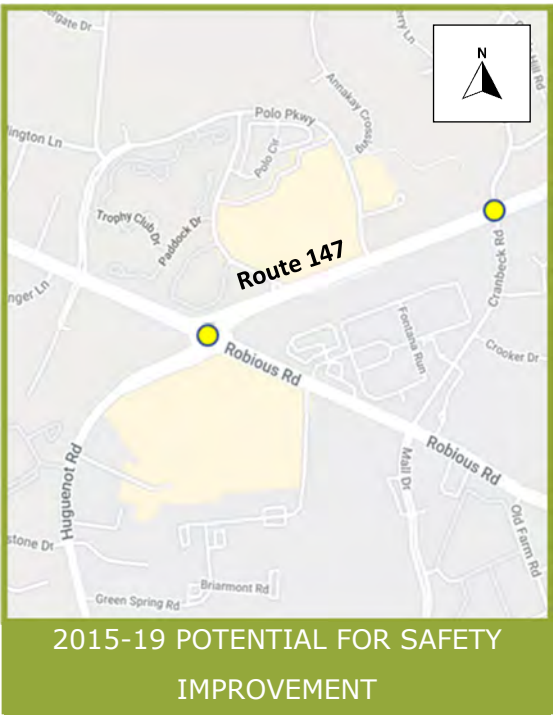
-Rear-end (71) and Angle (36) crashes are primary crash types.

-Most probable causes for crashes: Following too close / disregarding traffic signal

-Several rear end crashes at the channelized right turn lane at the intersection of Robious Road.

-Permissive-protected left-turn signal at Cranbeck Road: contributes to Angle crashes.

High travel time variability, and speed drops during the PM peak hour confirms the need for congestion mitigation strategies.



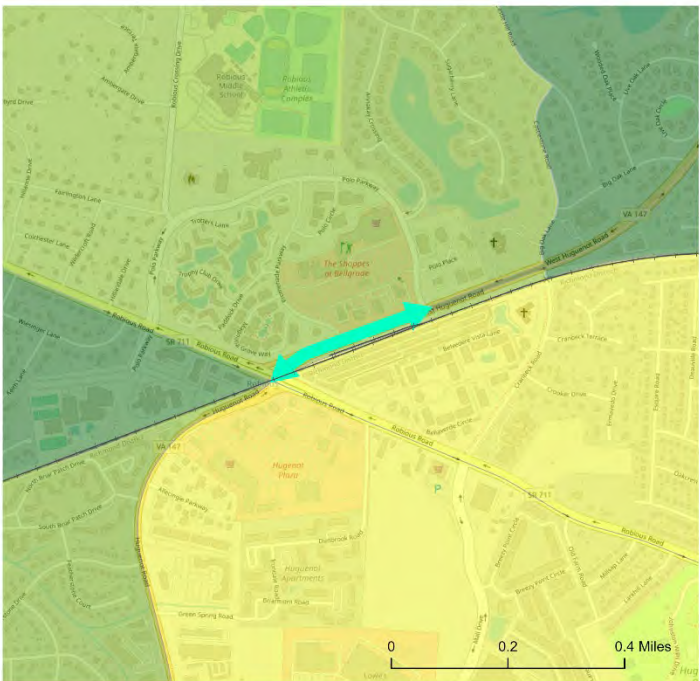
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VA 147 (Huguenot Road) from VA 711 (Robious Road) to Cranbeck Road



Existing Conditions

- At-grade crossing through the Robious/Huguenot intersection
- RideFinders is the region's commuter assistance program
- No park and ride lots in immediate area
- No bikesharing and scooter sharing services in this area
- No transit in corridor
- No transit facilities in corridor



Transportation Infrastructure All-Day Service Index

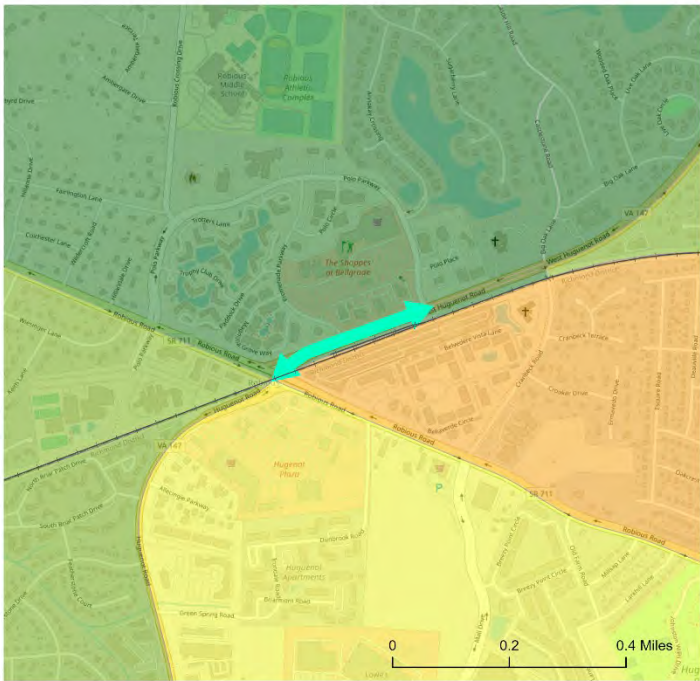
Legend:

- Park and Ride Locations
- Transit Stops
- Railroads
- Project Corridor

Propensity Score:

- High
- Moderately-High
- Moderate
- Low-Moderate
- Low

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.



Transportation Infrastructure Peak Commuter Index

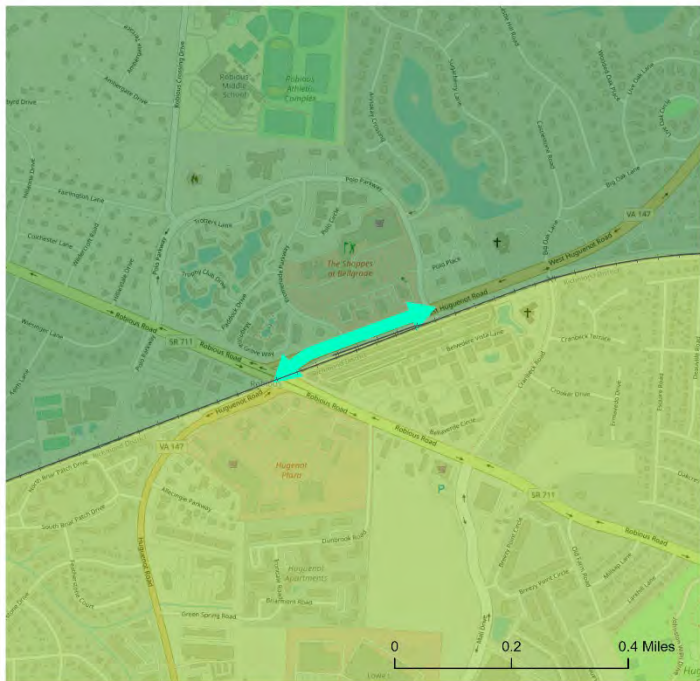
Legend:

- Park and Ride Locations
- Transit Stops
- Railroads
- Project Corridor

Propensity Score:

- High
- Moderately-High
- Moderate
- Low-Moderate
- Low

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.



Transportation Infrastructure Transit Potential

Legend:

- Park and Ride Locations
- Transit Stops
- Railroads
- Project Corridor

Jobs + Population per Acre:

- 60+
- 31 - 60
- 16 - 30
- 6 - 15
- 1 - 5
- <1

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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VA 147 (Huguenot Road) from VA 711 (Robious Road) to Cranbeck Road



Establish pedestrian network in corridor along Huguenot Road and Robious Road



Explore opportunities for a park and ride lot northwest of corridor (at Huguenot Trail and VA 288)



Greater Richmond Transit Vision Plan recommended high-frequency fixed route service on this part of the corridor, connecting Midlothian Turnpike to Henrico County via Huguenot Road and Chippenham/Parham Road



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.